BCT Meeting Agenda
April 25, 2006
Tetra Tech EMI– San Francisco Office
135 Main Street, Suite 1800
10:00 –14:45

1000	Introductions (Pat Brooks)
1010	Navy Business/Action Items (Pat Brooks)
1025	Landfill Gas Update (Melanie Kito)
1040	Basewide Groundwater Update (Pat Brooks)
1130	Parcel E/E-2 TCRA Update (Jose Payne)
1200	Lunch
1300	Building 606 Proposed Sewer Configuration, Proposed Parcel B FOSL, and Discussion of Crisp Avenue Soil Cuttings (Amy Brownell)
1345	Basewide Radiological Program Update (Ralph Pearce)
1415	Action Items (Pat Brooks)
1430	Document Review Matrix (Pat Brooks)
1445	Adjourn

Hunters Point Shipyard
Meeting Attendance Sheet

Topic: BCT Meeting
Location: 135 Main Street Suite 1800 San Francisco, CA 94105
Date/Time: April 25, 2006 / 10:00 a.m.

Organization	Name	Phone Number	E-Mail Address	Present
Navy	Keith Forman	619.532.0913	keith.s.forman@navy.mil	
	Patrick Brooks	619.532.0930	george.brooks@navy.mil	PBV
	Melanie Kito	619.532-0787	Melanie.kito@navy.mil	MK
	Kyle Olewnik	619.532-0789	kyle.olewnik@navy.mil	
	Jose Payne	619.532.0962	jose.payne@navy.mil	JP
	Ralph Pearce	619.532.0912	ralph.pearce@navy.mil	RCP
	Mark Walden	619.532.0931	mark.walden@navy.mil	
	Laurie Lowman	757.887.4692	lowmanll@raso.navy.mil	
	Matt Slack	757.887.4692	slackml@raso.navy.mil	
U.S. EPA	Michael Work	415.972.3024	Work.Michael@epa.gov	MW
	James Ricks	415.972.3023	Ricks.james@epa.gov	
DTSC	Tom Lanphar	510.540.3776	tlanphar@dtsc.ca.gov	TPL
	Eileen Hughes	510.540.3760	ehughes@dtsc.ca.gov	
Water Board	Jim Ponton	510-622-2492	jponton@waterboards.ca.gov	
	Gina Kathuria	510-622-2378	gkathuria@waterboards.ca.gov	GK.
City of SF/Lennar BVHP	Amy Brownell	415.252.3967	amy.brownell@sfdph.org	AOB
	Sigrida Reinis	415.955.9040	sreinis@treadwellrollo.com	
	Dorinda Shipman	415.955.9040	dcshipman@treadwellrollo.com	
	Sheila Roebuck	707-557-8223	sheila.roebuck@lennar.com	SR
	Michael Jacobvitz	707-793-3853	majacobvitz@mactec.com	
	Julie Turnross	707-824-1228	jlturnross@mactec.com	JT
Tech Law Inc. *EPA contractor*	Karla Brasaemle	415.281.8730	kbrasaemle@techlawinc.com	KB
Tetra Tech EM Inc. *Navy contractor*	Julia Vetromile	415.222.8225	Julia.Vetromile@ttemi.com	JV
	Leslie Lundgren	415.222.8205	Leslie.lundgren@ttemi.com	
	STEVE HALL	619-321-6709	steve.hall@ttemi.com	SHall
	STEVE Bradley	619-321-6717	steve.bradley@ttemi.com	SB
Barajas and Assoc. *Navy contractor*	Eli Vedagiri	619-338-0798	EliV@bai.cc	
	Angela Williams	619-338-0798	angelawilliams@bai.cc	AW
Tetra Tech EC, Inc. *Navy contractor*	Gerry Slattery	415-671-1990	gerard.slattery@tteci.com	
	Jamshid Sadeghipour	949-756-7519	Jamshid.sadeghipour@tteci.com	JS
CE2 *Navy contractor*	BOB FERRY	925 872 7264	RFERRY@CE2CORP.com	RAF
ITSI *Navy contractor*	Jim Schollard	925.946.3107	jschollard@itsi.com	
Restoration Advisory Board	Barbara Bushnell	415.285.1313	bbush58@yahoo.com	
CITY of SF	BROOK MEBRAHTU	415.557.4642	BROOK.MEBRAHTU@SFDPW.ORG	BM
Kleinfelder	Lynne Srinivasan	510 628 9100	lsrinivasan@kleinfelder.com	
Kleinfelder	Gary Thomas	707-571-1883	gthomas@kleinfelder.com	
Shaw	WAYNE AKIYAMA	925-288-2003	WAYNE.AKIYAMA@shawgrp.com	
ERRG	DOUG BIELSKIS	925-726-4119	dbielskis@errg.net	DB

CH2MHill Anne Estabrook

Hunters Point Shipyard Calendar

APRIL 2006

SUN	MON	TUE	WED	THU	FRI	SAT
Notes: BCT: Base Realignment and Closure Cleanup Team MBCO: Membership, Bylaws and Community Outreach RAB: Restoration Advisory Board TtEMI: Tetra Tech EM Inc. **Items in italics are tentative*						**1**
2	**3**	**4** Continue excavation at PCB hot spot and IR02- weather permitting	**5** Groundwater monitoring ongoing for wells scheduled to be decommissioned for Parcel B sewer work	**6**	**7**	**8**
9	**10**	**11**	**12** MBCO Subcommittee Meeting 6-8 p.m. Anna Waden Library 5075 Third Street, San Francisco 94124	**13**	**14**	**15**
16	**17**	**18**	**19** Technical Review Subcommittee Meeting 6-8 p.m. Anna Waden Library 5075 Third Street, San Francisco 94124	**20** Dry Dock 4 Caisson Removed	**21**	**22**
23	**24** Landfill Gas Monitoring	**25** BCT Meeting 10:00–3:00 p.m. TtEMI 135 Main Street, Suite 1800 San Francisco 94105	**26** Economic Subcommittee Meeting 5:00.-7:00 p.m. Bayview Police Station Community Room 201 Williams Avenue San Francisco 94124	**27** RAB Meeting 6:00-8:00 p.m. Class Room #313 Southeast Community College 1800 Oakdale Ave. San Francisco 94124	**28**	**29**
30	**Notes:**					

Hunters Point Shipyard Calendar

MAY 2006

SUN	MON	TUE	WED	THU	FRI	SAT
	1	2	3 Continue excavation at PCB hot spot and IR02- weather permitting	4 Groundwater monitoring ongoing	5	6
7	8	9	10	11	12	13
14	15	16 RASO re-inspection of Parcel B prior to excavation	17 Technical Review Subcommittee Meeting 6-8 p.m. Anna Waden Library 5075 Third Street, San Francisco 94124	18 MBCO Subcommittee Meeting 6-8 p.m. Anna Waden Library 5075 Third Street, San Francisco 94124	19	20
21	22 Landfill Gas Monitoring	23 BCT Meeting 10:00–3:00 p.m. TtEMI 135 Main Street, Suite 1800 San Francisco 94105	24	25 RAB Meeting 6:00-8:00 p.m. Alex Pitcher Room Southeast Community College 1800 Oakdale Ave. San Francisco 94124	26	27
28	29 Memorial Day	30	31	**Notes:** BCT: Base Realignment and Closure Cleanup Team RAB: Restoration Advisory Board TtEMI: Tetra Tech EM Inc. **Items in italics are tentative*		

Hunters Point Shipyard Calendar

JUNE 2006

SUN	MON	TUE	WED	THU	FRI	SAT
Notes BCT: Base Realignment and Closure Cleanup Team RAB: Restoration Advisory Board TtEMI: Tetra Tech EM Inc. **Items in italics are tentative*				1	2	3
4	5 Groundwater monitoring ongoing *BEC Presentation to the Morgan Heights Homeowners Association 6:30 -8:30 p.m City College Extension, 1400 Evans Avenue, in Room 102 from.*	6 Continue excavation at PCB hot spot and IR02- weather permitting	7	8	9	10
11	12 Begin RU-C1 Treatability Study	13	14	15	16	17
18	19 Landfill Gas Monitoring	20 BCT Meeting 10:00–3:00 p.m. TtEMI 135 Main Street, Suite 1800 San Francisco 94105	21	22 RAB Meeting 6:00-8:00 p.m. Alex Pitcher Room Southeast Community College 1800 Oakdale Ave. San Francisco 94124	23	24
25	26	27	28	29	30	

HUNTERS POINT SHIPYARD BASE REALIGNMENT AND CLOSURE CLEANUP TEAM ACTION ITEMS

Action	Date Identified	Responsible Party	Date Due	Date Accomplished	Notes
Basewide: Schedule NIRIS training for regulators.	24-May-05	Patrick Brooks (Navy)	Spring 2006	April 11, 2006	Completed
Basewide: Schedule future BCT meeting in San Diego	21-March-06	Keith Forman (Navy)	April 2006		Have heard from Water Board and Amy Brownell. Need to decide between June, July and August 2006
Basewide: Schedule further discussion of issues with groundwater samples that were not kept on ice.	21-March-06	Pat Brooks	April 2006	April 25, 2006	BCT presentation on April 25, 2006
Parcel B: Provide map with groundwater monitoring wells and plumes superimposed over storm drains and sanitary sewer lines.	22-February-06	Ralph Pearce (Navy)	March 2006	April 2006	Completed
Parcel C, RU-C1: Investigate repair or replacement of packer in Building 253 storm drain	21-March-06	Pat Brooks	April 2006	April 20, 2006	Inspected April 20, 2006
Parcels E and E-2: Confirm that NMFS letter regarding extended excavations has been distributed to BCT.	22-February-06	Jose Payne (Navy)	March 2006	April 25, 2006	Will be distributed at April BCT meeting
Parcels E and E-2: Provide agencies data on backfill sources for the TCRA excavations.	22-February-06	Pat Brooks	March 2006	April 21, 2006	Sent by email April 21, 2006
Parcel E, IR-02: Confirm the date for the site visit via e-mail.	6-December-05	Keith Forman	March 2006		Site visit has been postponed until May 2006 due to weather. Will be announced at TCRA phone conference when established

Notes:

BCT	Base Realignment and Closure (BRAC) Cleanup Team (BCT)
EPA	U.S. Environmental Protection Agency
IR	Installation Restoration
Navy	U.S. Department of the Navy
NIRIS	Naval Installation Information Solution
RAMP	Remedial action monitoring plan
RU	Remedial unit
Water Board	San Francisco Regional Water Quality Control Board

Recent Completed Review Periods
Document Review Table
Hunters Point Shipyard

Item	Parcel	Document Name	Submittal Date	Expected Date for Comments	Notes	Agency Submittal of Comments			
						EPA	DTSC	Water Board	City of SF
1	E-2	Final December 2005 Monthly Landfill Gas Monitoring Report	3/13/2006	n/a	For information purposes only			*	*
2	Basewide	Final Storm Water Discharge Management Plan	3/21/2006	n/a	For information purposes only		*		*
3	C,D,E	Draft January to March 2005 Basewide Groundwater Monitoring Report-Annual	3/22/2006	30 days from submittal date	Final date dependant on receipt of comments	Waived			*
4	E-2	Final January 2006 Monthly Landfill Gas Monitoring Report	4/17/2006	n/a	For information purposes only			*	*
5	B	Final Storm Drain and Sanitary Sewer Removal Design Plan	4/21/2006	n/a	For information purposes only				
6	Basewide	Final Storm Drain and Sanitary Sewer Removal Design Plan	4/21/2006	n/a	For information purposes only				
7	Basewide	Basewide Radiological Time Critical Removal Action Action Memorandum, 2006 Revision (Final)	4/21/2006	n/a	For information purposes only				

Notes:
* - comments deferred to other agency
n/a - not applicable

Ongoing Review Periods
Document Review Table
Hunters Point Shipyard

Item	Parcel	Document Name	Submittal Date	Expected Date for Comments	Notes	Agency Submittal of Comments			
						EPA	DTSC	Water Board	City of SF
1	B	Draft Technical Memorandum in Support of ROD Amendment	3/28/2006	6/15/2006	Final date based on receipt of agency comments				
2	E-2	Draft February 2006 Monthly Landfill Gas Monitoring Report	3/29/2006	30 days from submittal date	Final scheduled for May submittal			*	*
3	C	Draft RU-C1 Treatability Study Work Plan	3/31/2006	45 days from submittal date	Final date dependant on receipt of comments				
4	B	Draft April to June 2005 Quarterly Groundwater Monitoring Report	4/5/2006	30 days from submittal date	Final date dependant on receipt of comments				*
5	B	Draft October to December 2005 Groundwater Monitoring Report (Annual Report)	4/10/2006	30 days from submittal date	Final date based on receipt of comments				*
6	C,D,E	Draft April to June 2005 Basewide Quarterly Groundwater Monitoring Report	4/17/2006	30 days from submittal date	Final date dependant on receipt of comments				*
7	C,D,E	Draft July to September 2005 Basewide Groundwater Monitoring Report	4/19/2006	30 days from submittal date	Final date based on receipt of comments				*

Notes:
* - comments deferred to other agency
n/a - not applicable

Upcoming Review Periods
Document Review Table
Hunters Point Shipyard

Item	Parcel	Document Name	Submittal Date	Expected Date for Comments	Notes
1	B	Draft July to September 2005 Groundwater Monitoring Report	4/26/2006	30 days from submittal date	Final date based on receipt of comments
2	E-2	Draft March 2006 Monthly Landfill Gas Monitoring Report	4/26/2006	30 days from submittal date	Final scheduled for June submittal
3	C,D,E	Draft October to December 2005 Basewide Quarterly Groundwater Monitoring Report	4/27/2006	30 days from submittal date	Final date based on receipt of comments
4	B	Final October to December 2004 Groundwater Monitoring Report (Annual Report)	4/28/2006	n/a	For information purposes only
5	B	Final January to March 2004 Groundwater Monitoring Report	4/28/2006	n/a	Date dependent on receipt of comments
6	B	Draft Summary Report Building 123 SVE Treatability Study	4/28/2006	45 days from submittal date	Final scheduled for August submittal
7	C,D,E	Final January to March 2005 Basewide Quarterly Groundwater Monitoring Report	5/8/2006	n/a	For information purposes only
8	E	Shoreline Characterization Technical Memorandum RTCs	5/11/2006	n/a	Date is tentative
9	E-2	Final February 2006 Monthly Landfill Gas Monitoring Report	5/15/2006	n/a	For information purposes only
10	B	Final April to June 2005 Quarterly Groundwater Monitoring Report	5/19/2006	n/a	For information purposes only
11	B	Final July to September 2005 Groundwater Monitoring Report	5/22/2006	n/a	For information purposes only
12	Basewide	Community Notification Plan, Rev 1	5/24/2006	n/a	For information purposes only
13	B/C	Draft Parcels B/C Contamination Delineation at RU-C5 Technical Memorandum	5/26/2006	45 days from submittal date	Final scheduled for August submittal
14	C,D,E	Final April to June 2005 Basewide Quarterly Groundwater Monitoring Report	5/31/2006	n/a	For information purposes only
15	E-2	Draft April 2006 Monthly Landfill Gas Monitoring Report	5/31/2006	30 days from submittal date	Final scheduled for July submittal
16	C,D,E	Final July to September 2005 Basewide Quarterly Groundwater Monitoring Report	June-06	n/a	For information purposes only
17	E-2	Final March 2006 Monthly Landfill Gas Monitoring Report	June-06	n/a	For information purposes only
18	C	Final RU-C1 Treatability Study Work Plan	June-06	n/a	For information purposes only
19	B	Draft January to March 2006 Groundwater Monitoring Report	June-06	30 days from submittal date	Final date based on receipt of comments
20	E-2	Draft Remedial Investigation/Feasibility Study	June-06	45 days from submittal date	Draft final date based on receipt of comments
21	F	Draft Feasibility Study	June-06	45 days from submittal date	Draft final date based on receipt of comments
22	B	Draft Radiological Addenda for the TMSRA	June-06	45 days from submittal date	Final scheduled for October submittal
23	D	Draft Radiological Addenda for the FS	June-06	45 days from submittal date	Final scheduled for October submittal
24	E-2	Draft Radiological Addenda for the RI/FS	June-06	45 days from submittal date	Final scheduled for October submittal

Upcoming Review Periods
Document Review Table
Hunters Point Shipyard

Item	Parcel	Document Name	Submittal Date	Expected Date for Comments	Notes
25	E-2	Draft May 2006 Monthly Landfill Gas Monitoring Report	June-06	30 days from submittal date	Final scheduled for August submittal
26	C,D,E	Final October to December 2005 Basewide Quarterly Groundwater Monitoring Report	June-06	n/a	For information purposes only
27	Basewide	Draft 2005-2006 Annual Storm Water Report	June-06	n/a	For information purposes only
28	E, E-2	Draft Wetlands Mitigation and Monitoring Plan for the Metal Debris and Slag areas	June-06	45 days from submittal date	Date is tentative
29	E-2	Draft 2005-2006 Annual Storm Water Report	June-06	n/a	For information purposes only
30	B	Final October to December 2005 Groundwater Monitoring Report (Annual Report)	July-06	n/a	For information purposes only
31	C,D,E	Draft January to March 2006 Basewide Quarterly Groundwater Monitoring Report	July-06	30 days from submittal date	Final date based on receipt of comments

Parcel E-2 Landfill Gas Update for March 2006

Hunters Point Shipyard

BCT Meeting

April 25, 2006

Monitoring Locations

- 32 GMPs
  - 14 Barrier Wall and Landfill Boundary (Fence Line) (five passive vents also are monitored)
  - 5 UCSF Compound
  - 13 Crisp Avenue
- On-site Structures
  - 2 Catch Basins
- UCSF Compound
  - Building 830 crawlspace
  - Surface scans at 3 locations

Parameters Monitored

Item	Units	GMPs	Structures	Surface
Methane	percent; percent LEL	X	X	X
Background NMOCs	parts per million	X	X	X
NMOCs	parts per million	X	X	X
CO_2	percent	X	X	X
O_2	percent	X	X	X
Soil Gas Pressure	inches of water	X		

In addition, temperature and barometric pressure are recorded at the meteorological station. Groundwater elevations are monitored at selected locations.

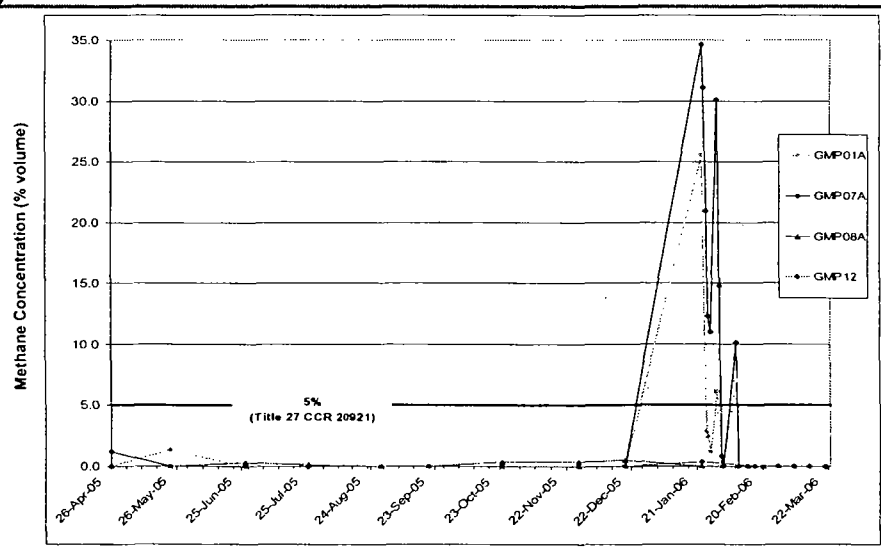
Summary of Monitoring Results – March '06

- **March 2006 results for methane were below regulatory requirements at all monitoring locations:**
  - All GMPs were below 2.5% (the action level for increased monitoring frequency)
  - Methane was not detected in any GMPs, on-site structures, or ambient air locations.
- **Routine monthly monitoring was performed on March 21. Prior to this event, additional monitoring for methane was also performed on March 6 (at GMP01A and 07A) and March 13 (GMP01A, 07A, 23, and 24) as precautionary measures following the elevated methane detections in January and February 2006. Methane levels at these GMPs were at 0.0% for all three events.**
- **NMOCs were well below action levels (5 ppm at on-site structures and utilities; 100 ppm at the control system; 500 ppm at GMPs) at all locations. NMOCs were detected in PV-01 (9.0 ppm at the influent) and PV-05 (13.4 at the influent) but were 1.3 and 2.1 ppm, respectively, at the effluent ports.**
- **All of the extraction well/electrical vaults have been removed.**
- **PG&E power was restored to the control system on March 27. Active extraction at PV-02 is now being performed 24 hours a day, 7 days a week.**

Monitoring Results – March 2006

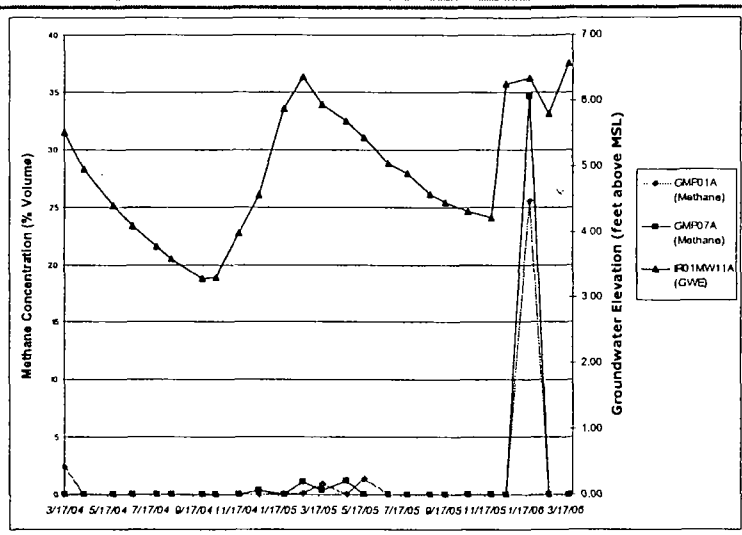
System	Methane	NMOCs	Action
Crisp Ave. GMPs	ND	**< 500 ppm** (none > 0.1 ppm)	No action required.
On-site Structures	ND	**< 5 ppm** (none > 0.1 ppm)	No action required.
UCSF Compound GMPs	ND	**< 500 ppm** (none > 0.1 ppm)	No action required.
Building 830	ND	**< 5 ppm** (none > 0.1 ppm)	No action required.
Fence Line GMPs	ND	**< 500 ppm** (none > 0.1 ppm)	No action required
Control System	0–0.5%	**< 100 ppm at effluent** (PV-01 influent = 9.0 ppm PV-01 effluent = 1.3 ppm PV-05 influent = 13.4 ppm PV-05 effluent = 2.1 ppm)	Active extraction at PV-02. Passive extraction at PV-01 and PV-03 through PV-05.

Methane Concentrations at Fence Line GMPs



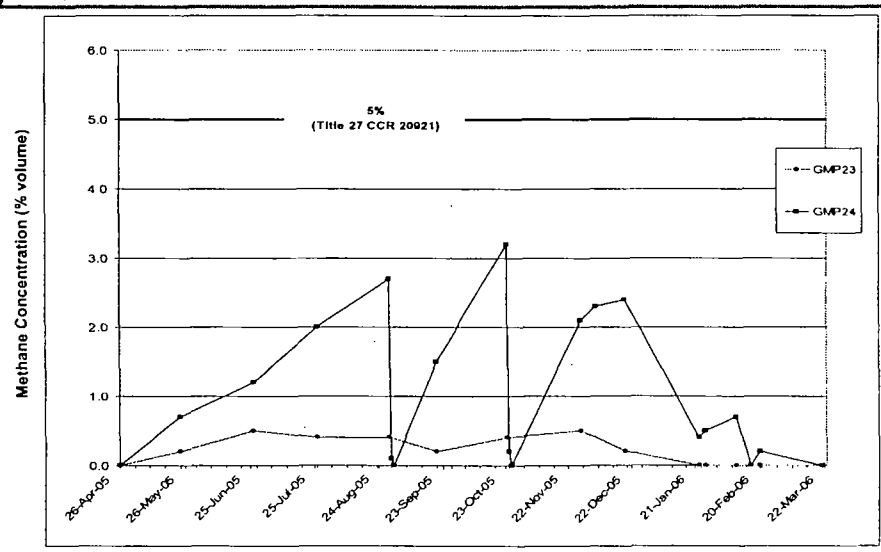
Methane was not detected at GMPs 02A, 03, 04A, 05B, 06B, 09A, 10A, 11A, 20, and 21. These GMPs are not plotted for the sake of clarity.

Methane Concentrations and Groundwater Elevations



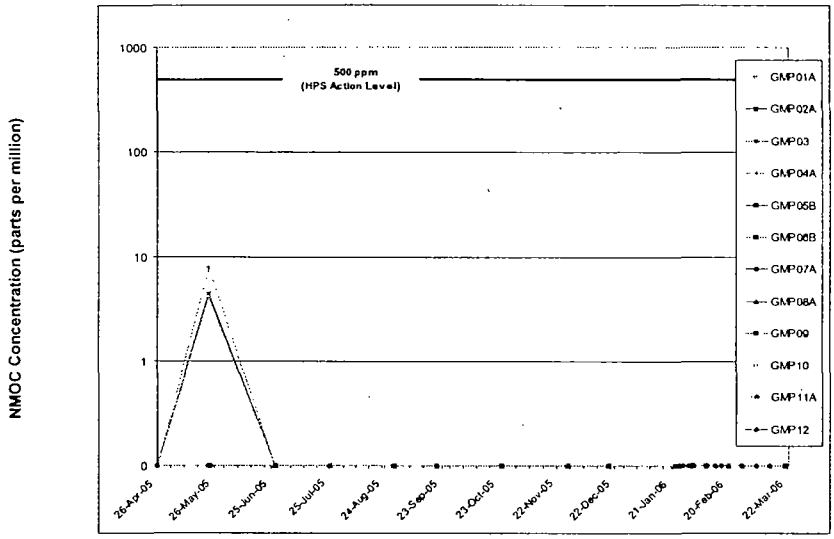
Note: GWE indicates groundwater elevation at a monitoring well

Methane Concentrations at UCSF GMPs

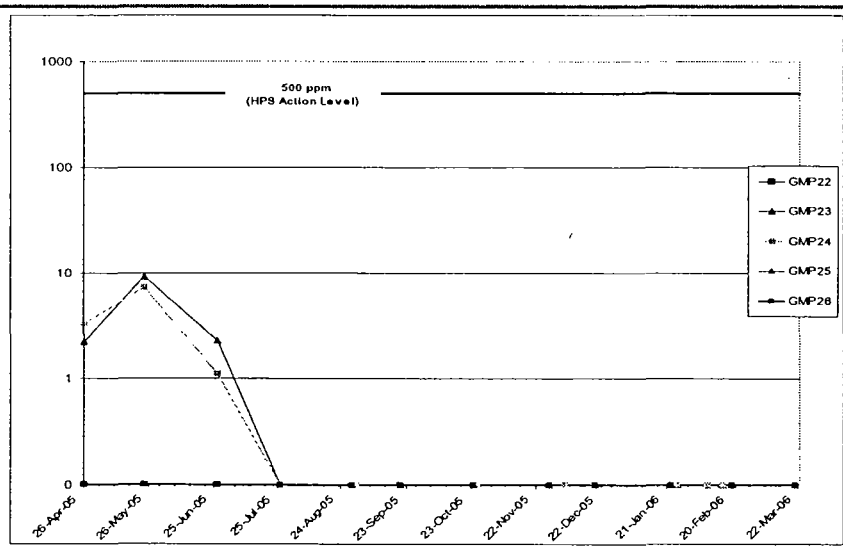


Methane was not detected at GMPs 22, 25, or 26. These GMPs are not plotted in the interest of clarity.

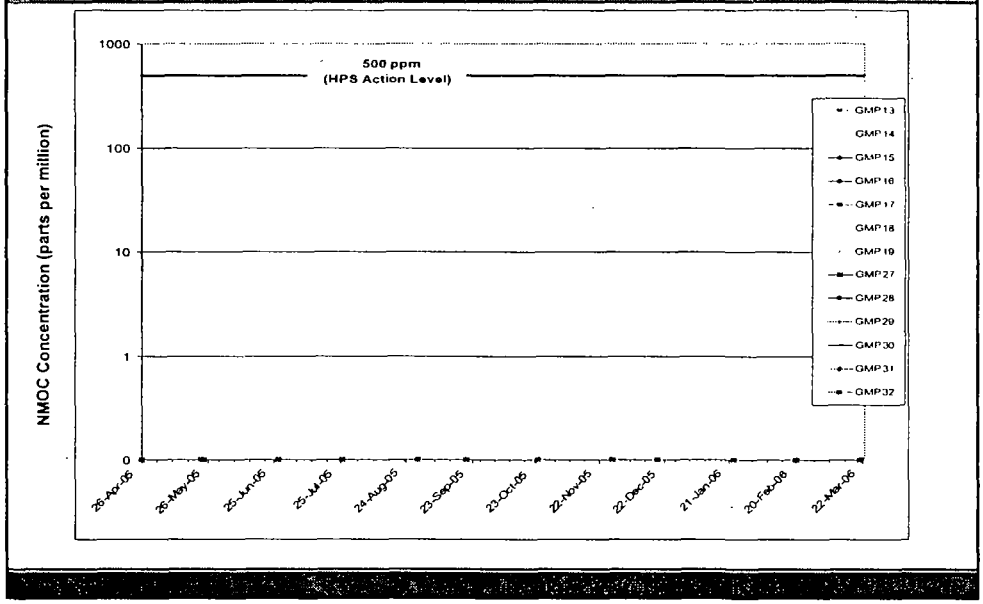
NMOC Concentrations at Fence Line GMPs



NMOC Concentrations at UCSF GMPs



NMOC Concentrations at Crisp Ave. GMPs



Base-wide Groundwater Update

Hunters Point Shipyard

BCT Meeting

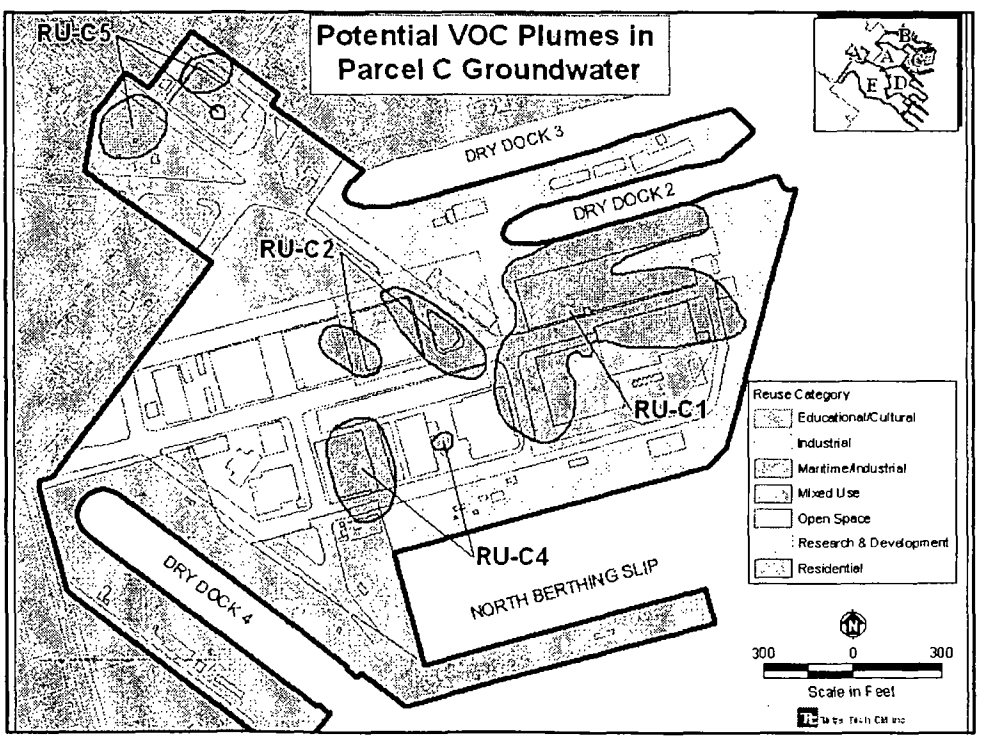
April 25, 2006

Outline

- Why does the Navy conduct treatability studiies?
- Progress and recommendations for treatability study areas
  - RU-C1
  - RU-C4
  - RU-C5
  - IR-10
- Impacts due to planned sewer/storm drain work
- Proposed additional monitoring wells

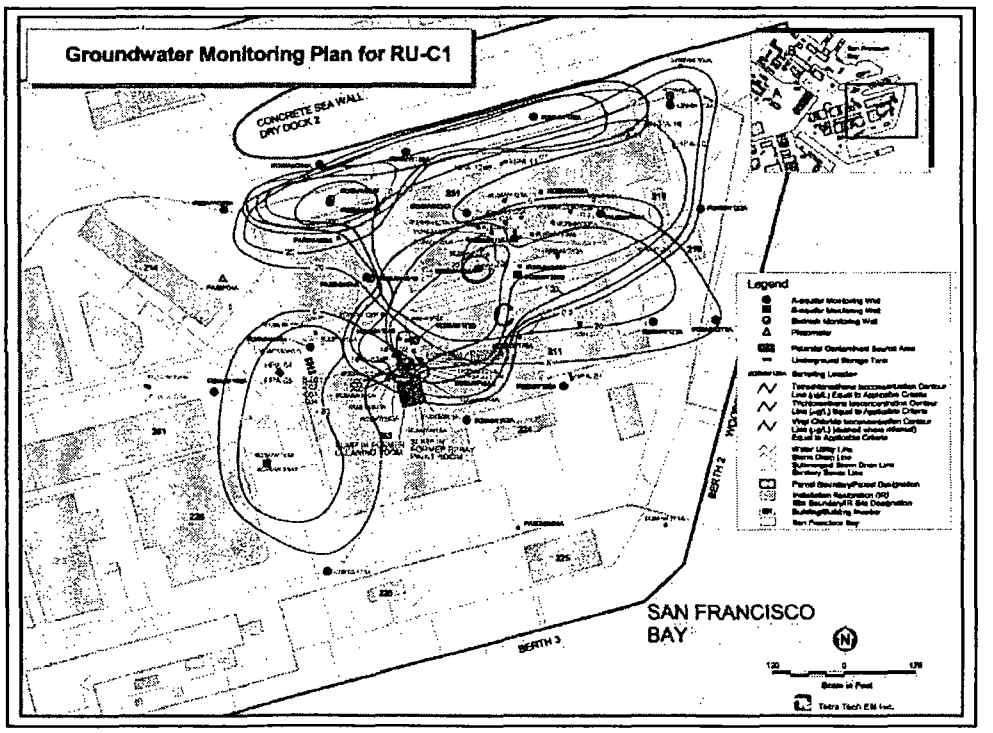
Why Conduct Treatability Studies

- Treatability studies help the Navy, regulatory agencies and RAB evaluate new technologies for shipyard cleanup
- Some technologies are so new that they've only been tried several times; others are dependant on site-specific factors like geology or mixture of contaminants
- If successful, treatability studies accelerate cleanup
- The cleanup design is refined after the Record of Decision is signed and all parties agree on the cleanup methods



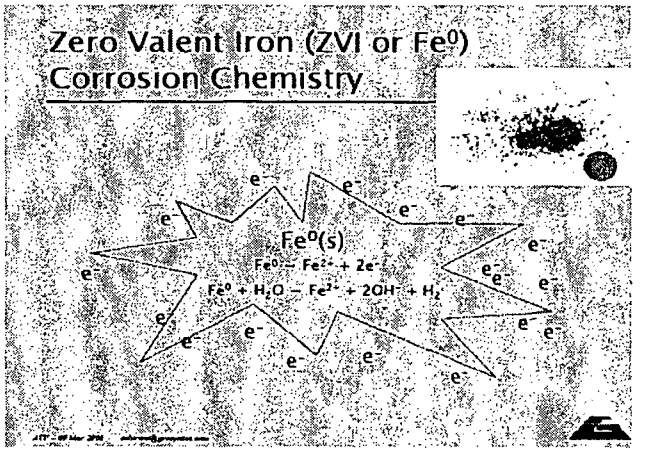
RUC1 - In-situ Bio-treatabililty Study

- Evaluate in-situ bioremediation in a low concentration, tidally-influenced solvent plume
- Work plan submitted March 31, 2006
- Comments due May 17
- Finalize and submit work plan on May 31
- Begin field work on June 12
  - –Pre-mobilization work included a site survey and verification that storm drain packers are still in place and operational

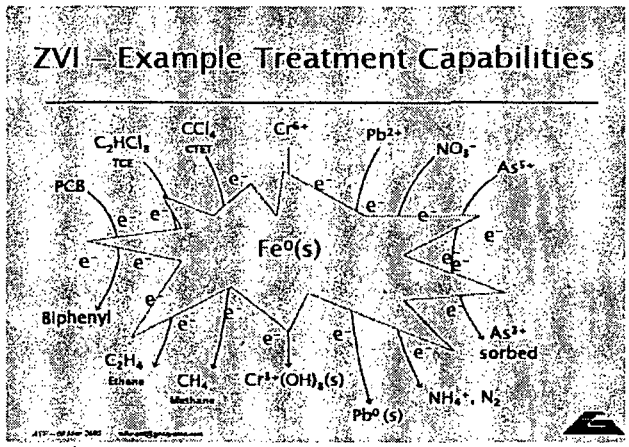


RUC4 – Zero-valent Iron Injection

- High solvent concentrations in a fractured bedrock aquifer
- December 2002 – injected 16,000 pounds iron at four locations within groundwater hot spot
- September/October 2004 – injected 73,000 pounds iron at thirteen locations surrounding hot spot
- Subsequent groundwater monitoring proved the technology effectiveness



ZVI – Example Treatment Capabilities

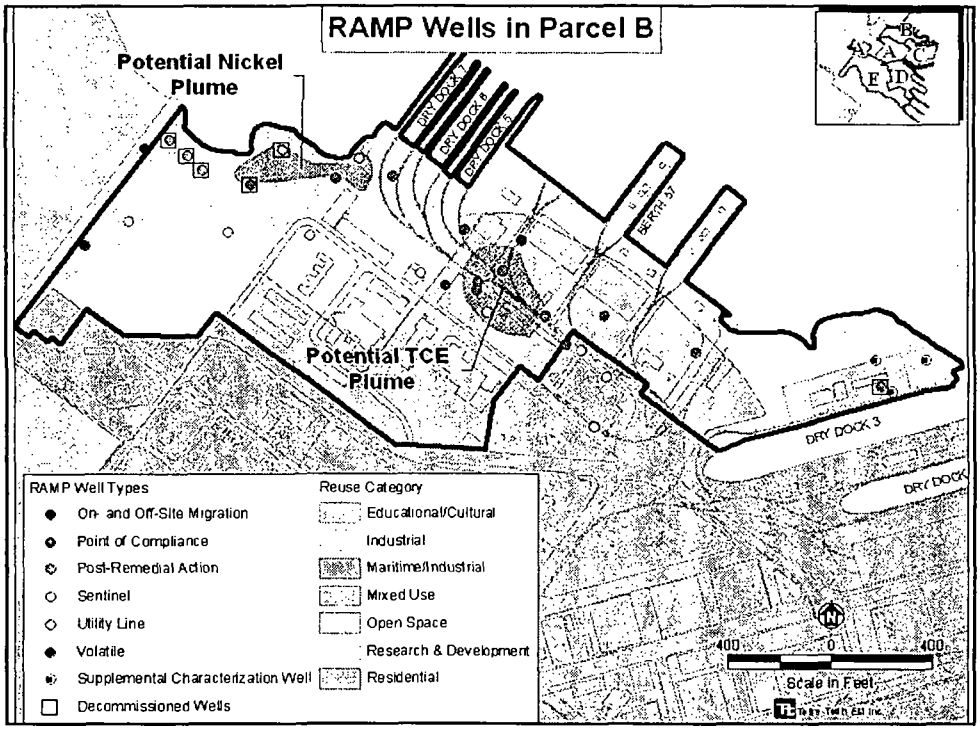


RUC4 Results and Conclusions

- Hot spot well IR28MW211F

December 2002	September 2005
–78,000 ug/L TCE; -550 mVolts	5 ug/L TCE; -72 mVolts

- Contaminant destruction is ongoing
- TCE, vinyl chloride and other breakdown products are still above cleanup levels, but further decline is expected
- Additional treatment will be recommended in the Parcel C Feasibility Study



RUC5 In-situ Bio-treatability Study

- Sequential anaerobic/aerobic treatability study for mixture of contaminants including chlorinated solvents
- April - June 2004 – injected food-grade sodium lactate into treatment area (groundwater hot spot)
- January – May 2005 – Oxygen amendment in treatment area
- Subsequent groundwater monitoring proved the technology effectiveness, and pointed out that a persistent source of contamination is present near IR25MW54A

RUC5 Results and Conclusions

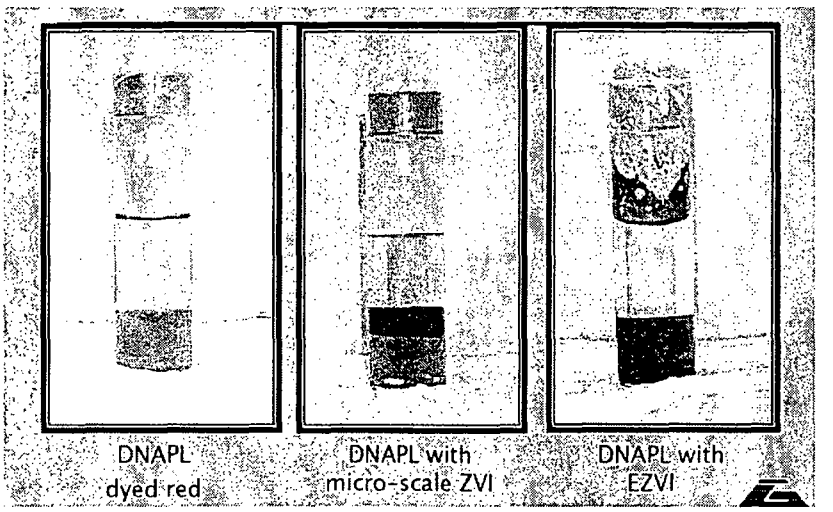
- Hot spot well IR25MW54A and nearby well IR25MW56A

	March 2004	May 2005
MW54	32,600 ppb PCE; 2,500 ppb TCE	5,220 ppb PCE; 807 ppb TCE
MW56	1,650 ppb PCE; 650 ppb TCE	23 ppb PCE; 27 ppb TCE

- Contaminants in treatment area were effectively destroyed, except near MW54A where DNAPL was found
- TCE, vinyl chloride and other breakdown products are still above cleanup levels at RUC5
- Further treatment will be recommended in the Parcel C Feasibility Study, including source removal near MW54

What is DNAPL?

- DNAPL is the pure form of solvent used for removing grease and carbon from ship repair parts
- DNAPL stands for dense non-aqueous phase liquid
  - It is denser than water, so it sinks into the aquifer
  - It is a non-aqueous phase, so it does not mix with water
  - It is a liquid, so it can migrate once in the aquifer
- DAPL acts as a continuing source of groundwater contamination
- It must be removed or destroyed before groundwater cleanup can be successful



DNAPL Cleanup Technologies

- Extraction with groundwater
  - Requires a large number of wells to be effective
  - Enhancement possible by applying a vacuum to the well
- Excavation
  - Because DNAPL sinks, the excavation would likely be very deep
- Emulsification with other treatment fluids
  - ZVI
  - Sodium lactate
  - May mobilize contaminants

IR10 Zero-valent iron Injection

- High solvent concentrations in a A-aquifer composed mostly of fill material
- September – October 2003 – injected 130,000 pounds iron at thirty-seven locations within groundwater plume
- Subsequent groundwater monitoring proved the technology effectiveness

IR10 Results and Conclusions

- Hot spot well IR10MW71A

–October 2003	December 2005
–1,200 ug/L TCE; 120 mVolts	59 ug/L TCE; 21 mVolts

- Contaminant destruction is ongoing
- Area of groundwater contamination remains about the same, but concentrations are decreasing
- TCE, vinyl chloride and other breakdown products are still above cleanup levels, but further decline is expected
- Additional treatment will be recommended in Parcel B TMSRA

Parcel B RAMP Wells vs. Rad Program

- Several Parcel B remedial action monitoring program (RAMP) wells will be decommissioned as the sanitary sewer and storm drain lines are removed for radiological survey
- Regularly scheduled monitoring will be completed before wells are decommissioned
- Replacement RAMP wells will be drilled near their original locations once sewer/storm drain line excavations are completed

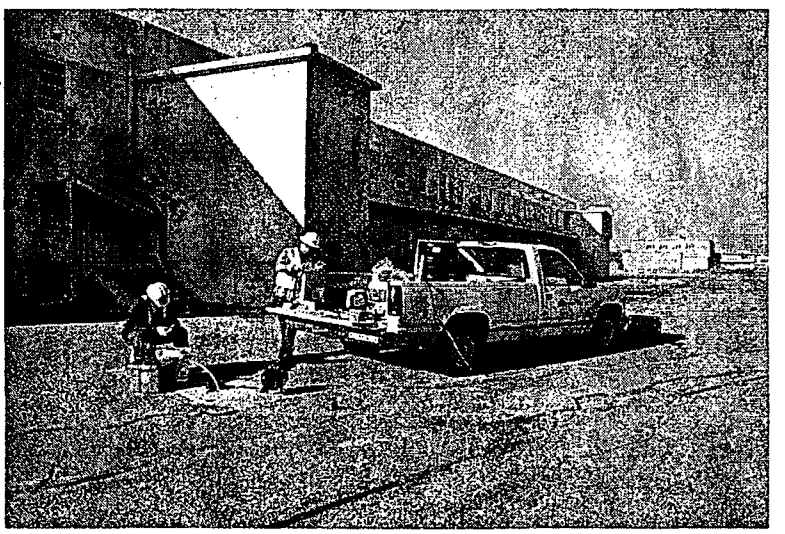
RAMP Wells Proposed for Decommissioning

Well Name	Type	Sampling Frequency
PA50MW01A	POC and VOC Well	Quarterly
UT03MW11A	Sentinel	Semi-annually
IR06MW45A	Sentinel and VOC	Quarterly – VOCs Semi-annual - others
IR10MW12A	Chromium and VOC	Quarterly

Proposed New Wells

- Replace decommissioned RAMP wells
- Additional monitoring for mercury at IR26
- Evaluate recommendations for new wells in the Q5 Parcels C, D, and E Groundwater Report (21 wells total)

Questions



CDM
9444 Farnham Street, Suite 210
San Diego, CA 92123
tel: 858 268-3383
fax: 858 268-9677

April 21, 2006
DOC No. 7455

G. Patrick Brooks, P. G.
Lead Remedial Project Manager
Department of the Navy
Base Realignment and Closure
Program Management Office West
1455 Frazee Road Suite 900
San Diego, CA 92108

Subject: Contract N68711-00-D-0004, Delivery Order 0074
Basewide Groundwater Sampling at Parcels B, C, D and E at Hunters Point Naval Shipyard, San Francisco, CA
Groundwater Sampling Procedures and Data Analysis for the June 2005 Groundwater Sampling Audit Findings

Dear Mr. Brooks:

Enclosed is a memorandum responding to information presented in the U. S. Environmental Protection Agency groundwater sampling procedures audit findings for June 2005. Attachments include groundwater data analysis tables and the EPA audit findings summary.

If you have any questions or require additional information, please call me at (858) 268-3383.

Sincerely,
CDM Federal Programs Corporation

Larry Davidson

Larry Davidson, P.E.
Program Manager

c: C. Kolodji (NAVFAC, w/o enclosure)
C. Johnson (Kleinfelder)
D. McCray
P. Stroganoff (EFA West, w/o enclosure)
G. Goodemote (Kleinfelder)
File

KLEINFELDER

MEMO

To: George P. Brooks, Department of the Navy

From: Gary Goodemote, Kleinfelder, Inc. Gary Goodemote

cc: Lynne Srinivasan, KA
Chris Johnson, KA
Darlene McCray, CDM
Ed Kilduff, CE2 Corporation

Date: April 21, 2006

RE: Data Analysis for June 2005 Audit Findings

During the February and March 2006 BCT meetings, Karla Brasaemle, of TechLaw, raised the issue of proper sample handling procedures utilized by the groundwater sampling program. Ms. Brasaemle was referring to observations made by herself and Mr. Jim Ponton of the Regional Water Quality Control Board during an audit of the groundwater sampling program on Tuesday, June 28, 2005 during the second quarterly event of 2005.

As a result of the meeting, Kleinfelder again reviewed the attached e-mail transmittal and EPA audit findings report dated September 13, 2005. Several findings were identified in the report as factors that may compromise sample integrity. Most significant of which, was the auditors observing samples being placed into a cardboard box and not immediately into a cooler with ice. The audit report notes that a cooler with ice was brought out to the sample crew shortly after the observation was made. This was an unfortunate one-time oversight by the sample crew and not the standard operating procedure.

Immediately following the audit, each of the sample crews was reminded of the importance of placing samples into iced coolers immediately after collection. Kleinfelder also modified many of the sample procedures based upon the audit results, including sending the empty sample containers out with each field crew lead in iced coolers and having relevant sections of the SAP with each crew.

To verify that the sample handling process did not have an effect on sample integrity, Kleinfelder staff researched trichloroethene (TCE) and vinyl chloride (VC) sample results from 16 wells for sampling Quarters 2 through 4 of 2004 and 1 through 4 of 2005. These 16 wells were randomly chosen from approximately 160 wells that typically have TCE or VC concentrations above the method detection limit. It should be noted that the well where the observation was noted (IR03MW224A) was not included in the data analysis as the well has not had TCE or VC concentrations above the method detection limit since the program began in the second quarter of 2004.

The TCE and VC sample results for the 16 wells are presented in the attached table and charts. Due to the wide range of concentrations three charts were prepared for both TCE and VC. The charts were based upon three data sets for each constituent that allowed the charts to present the data with the largest scale possible. The TCE results were separated into the following three groups:

- Wells with TCE concentrations with maximum concentrations of 13 µg/L,
- Wells with TCE concentrations up to 70 µg/L, and
- Wells with maximum TCE concentrations greater than 70 µg/L.

The VC results were separated into the following three groups:

- Wells with VC concentrations up to 6 µg/L,
- Wells with VC concentrations up to 130 µg/L, and
- Wells with maximum concentrations greater than 130 µg/L.

Each of the charts shows the TCE or VC concentrations for quarters sampled prior to the audit (quarters 2 through 4 of 2004 and quarters 1 of 2005), the quarter of the audit (quarter 2 of 2005) and after the audit (quarters 3 and 4 of 2005).

It would be expected that if the integrity of the samples had been compromised due to poor handling procedures, then a noticeable rise in the VOC concentrations would be observed between the pre-audit and post audit sampling quarters. The data shown on the charts indicate that although there is fluctuation in the sample results, the fluctuation does not show a rise in VOC concentrations in post audit quarters. Therefore, there is no indication that sample integrity was compromised as a result of sample handling procedures prior to quarter 2 of 2005.

This research was not exhaustive in nature and only intended to assess if the observed sample handling procedures had any affect on sample integrity.

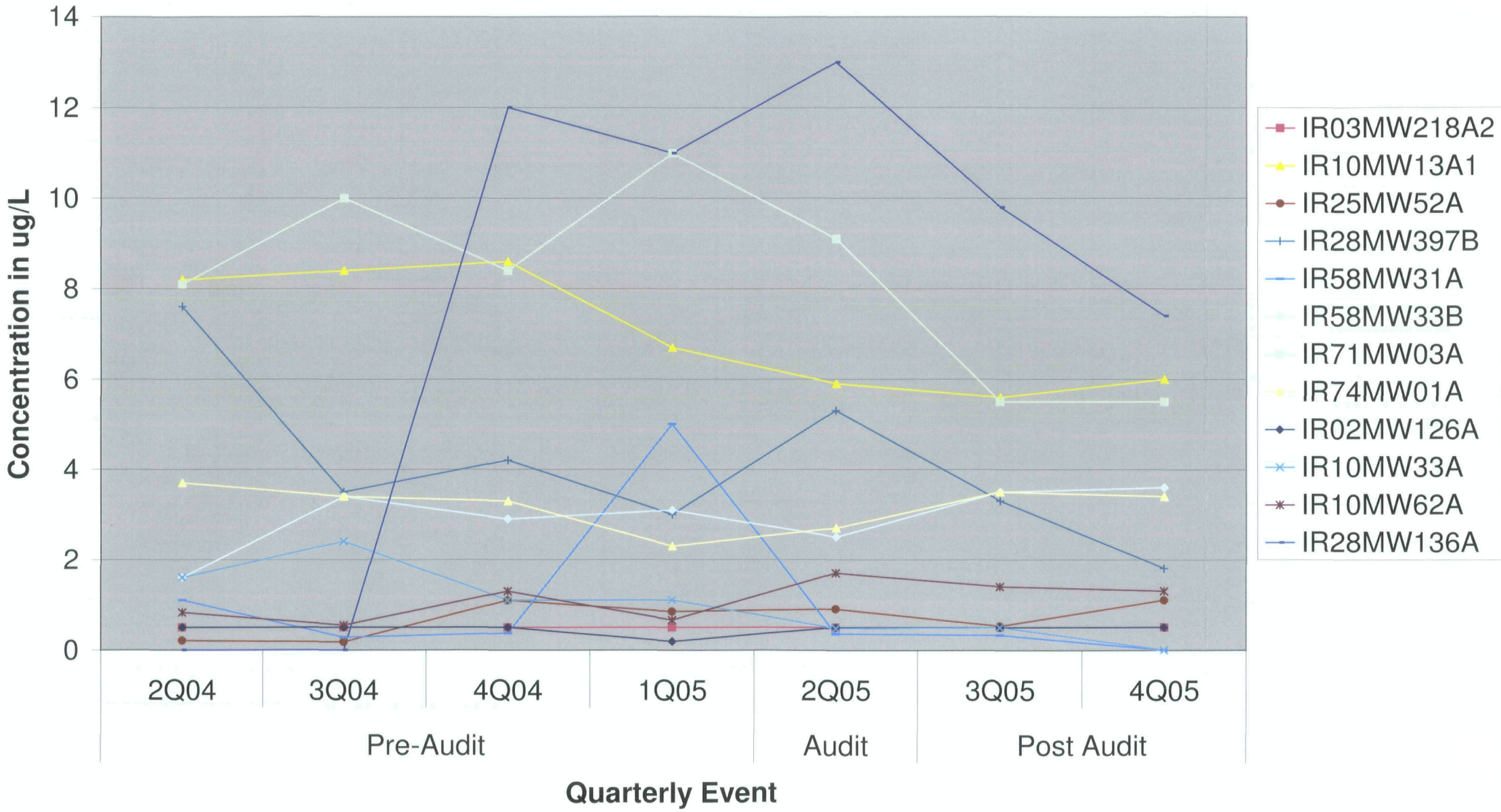
Please let me know if you have any further questions regarding this or any other procedures employed in our field process.

Attachments

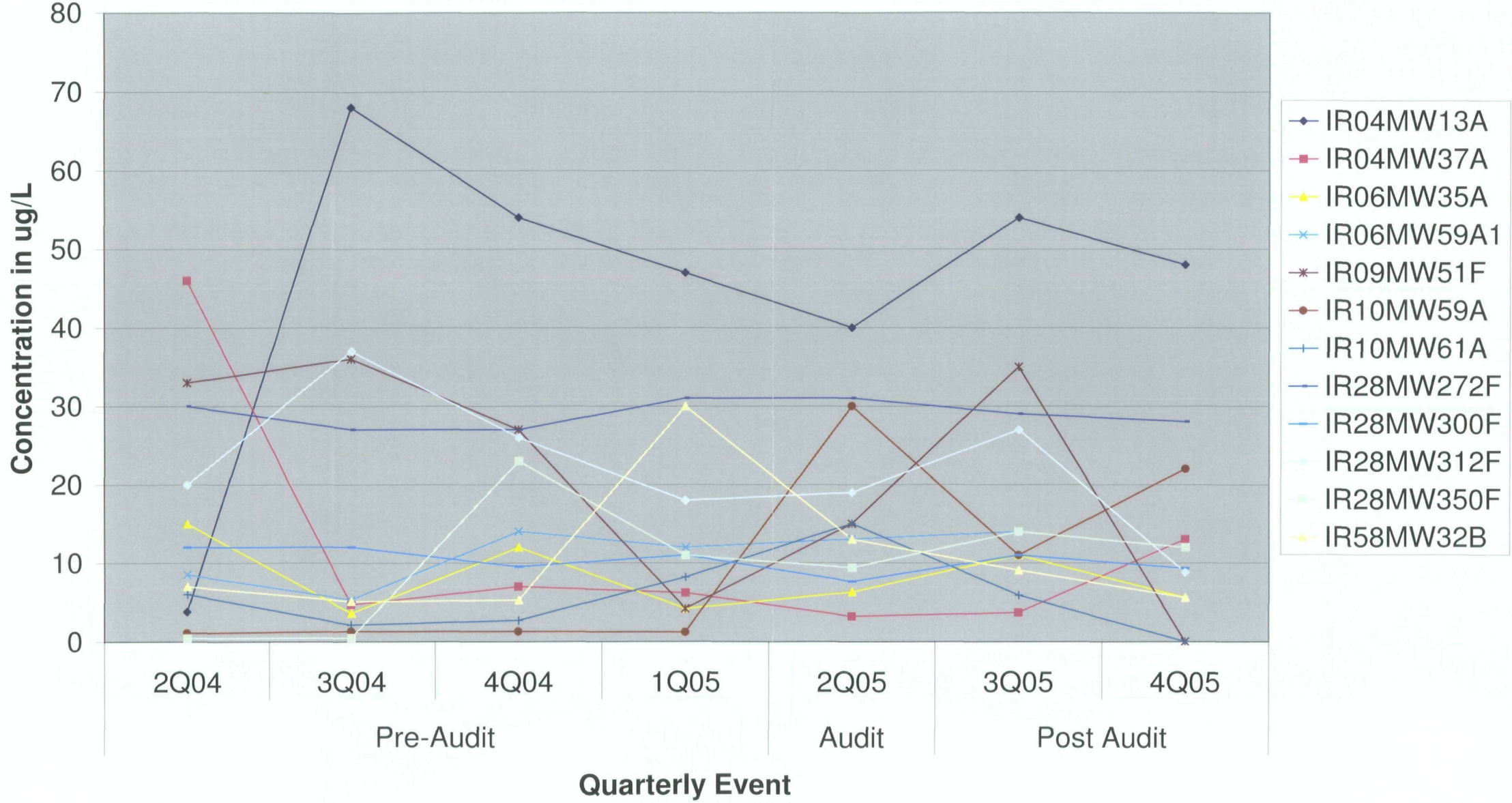
Table 1
Trichloroethene and Vinyl Chloride Concentrations from 16 Wells
Hunters Point Naval Shipyard

	TRICHLOROETHENE							VINYL CHLORIDE						
	Pre-Audit				Audit	Post Audit		Pre-Audit				Audit	Post Audit	
	2Q04	3Q04	4Q04	1Q05	2Q05	3Q05	4Q05	2Q04	3Q04	4Q04	1Q05	2Q05	3Q05	4Q05
IR02MW126A	0.5	0.5	0.5	0.19	0.5	0.5	0.5	0.63	0.5	0.28	0.5	0.9	0.57	0.61
IR03MW218A2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.2	0.19	0.5	0.79
IR04MW13A	3.8	68	54	47	40	54	48	0.5	4.2	2.8	4	3.9	2.3	2.4
IR04MW37A	46	4.7	7	6.2	3.2	3.7	13	2.1	0.5	0.5	0.5	0.5	0.5	0.5
IR06MW35A	15	3.6	12	4.2	6.3	11	5.6	2	5.4	1.5	2.6	1.1	2.5	0.9
IR06MW59A1	8.5	5.3	14	12	13	14	12	78	80	39	17	19	39	26
IR09MW51F	33	36	27	4.2	15	35	ND	0.5	0.5	0.5	0.5	0.5	0.5	0.5
IR10MW13A1	8.2	8.4	8.6	6.7	5.9	5.6	6	0.71	2.4	2.4	2.6	1	0.86	0.66
IR10MW33A	1.6	2.4	1.1	1.1	0.48	0.5	ND	0.5	0.97	2.1	1.9	0	2.7	2.4
IR10MW59A	1.1	1.3	1.3	1.2	30	11	22	0.5	0.5	0.5	0.5	0.5	0.5	0.5
IR10MW61A	6	2.1	2.7	8.2	15	5.9	ND	120	240	170	81	44	57	34
IR10MW62A	0.83	0.55	1.3	0.66	1.7	1.4	1.3	0.3	0.5	0.5	0.5	0.5	0.5	0.5
IR10MW71A	0.5	0.97	340	220	210	110	59	0.5	0.5	0.7	5.1	5.6	4	2.2
IR25MW16A	510	11	120	140	270	140	190	4.5	0.5	5.9	2.7	3.2	2.2	2.3
IR25MW52A	0.21	0.18	1.1	0.85	0.91	0.53	1.1	1.4	0.5	3.9	4.7	2.7	0.49	2.1
IR28MW136A	--	--	12	11	13	9.8	7.4	--	ND	120	120	83	96	120
IR28MW151A	--	24	55	160	56	23	81	--	490	160	1000	460	290	220
IR28MW211F	69	150	6.7	5.6	4.8	7.1	36	6.5	21	50	130	56	57	25
IR28MW272F	30	27	27	31	31	29	28	0.5	0.5	0.5	--	0.5	0.5	0.5
IR28MW300F	12	12	9.5	11	7.6	11	9.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5
IR28MW312F	20	37	26	18	19	27	8.8	0.5	0.5	0.5	--	0.5	0.5	0.5
IR28MW350F	0.46	0.48	23	11	9.4	14	12	0.5	0.5	0.5	0.5	0.5	0.5	0.5
IR28MW397B	7.6	3.5	4.2	3	5.3	3.3	1.8	0.5	0.5	0.5	0.5	0.5	0.5	0.5
IR28MW406	310	350	270	170	210	330	150	0.5	0.5	0.5	0.5	0.5	0.5	0.5
IR58MW31A	1.1	0.28	0.37	5	0.36	0.33	ND	360	1700	490	150	81	170	82
IR58MW32B	7	5.1	5.3	30	13	9.1	5.6	1.3	0.28	0.5	22	3.3	1.1	0.5
IR58MW33B	1.6	3.4	2.9	3.1	2.5	3.5	3.6	110	67	4.6	29	11	1.1	0.5
IR71MW03A	8.1	10	8.4	11	9.1	5.5	5.5	0.5	0.5	1.5	0.5	0.5	0.5	0.5
IR74MW01A	3.7	3.4	3.3	2.3	2.7	3.5	3.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5

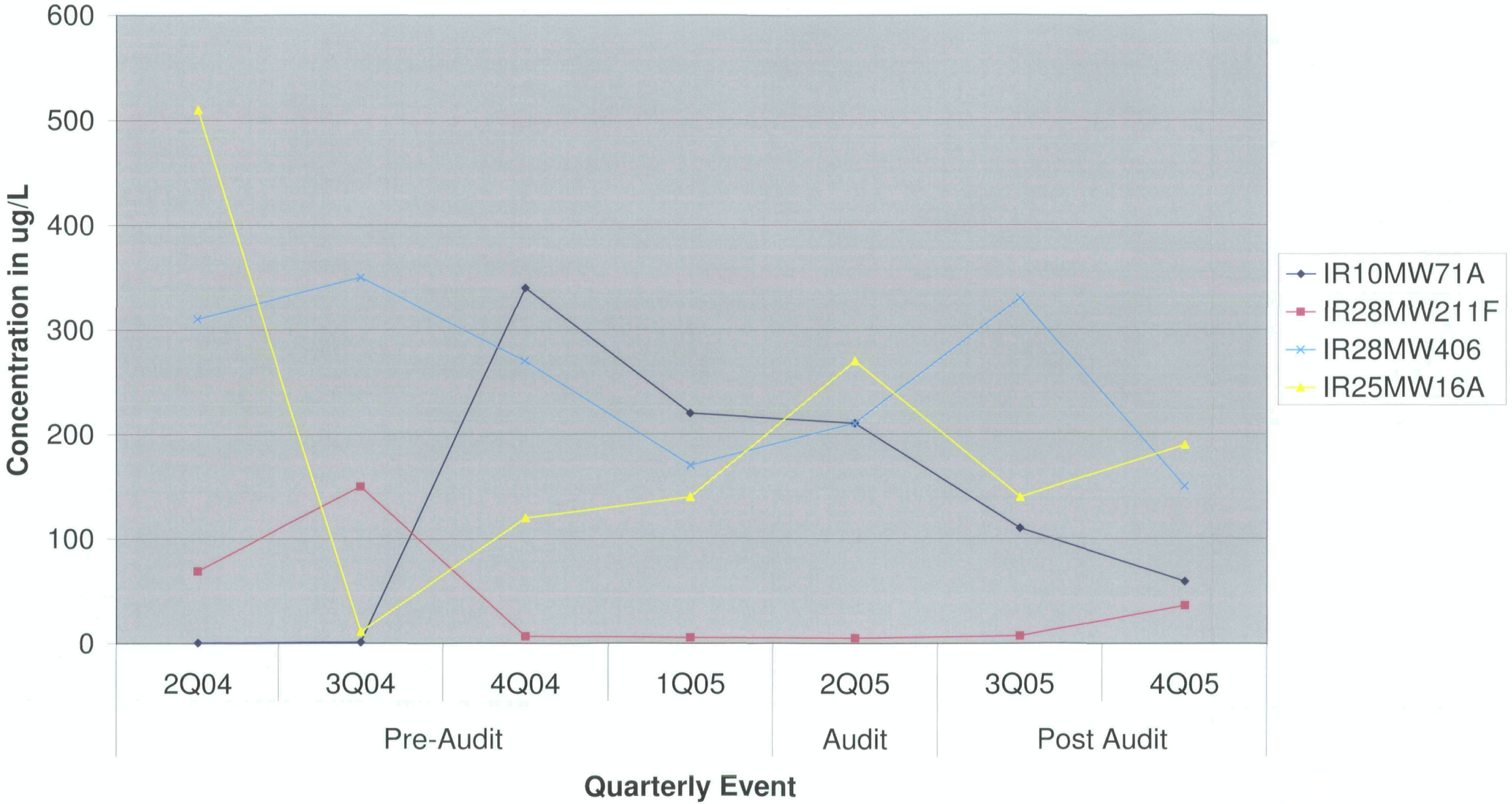
TCE Maximum Concentration 13 ug/L



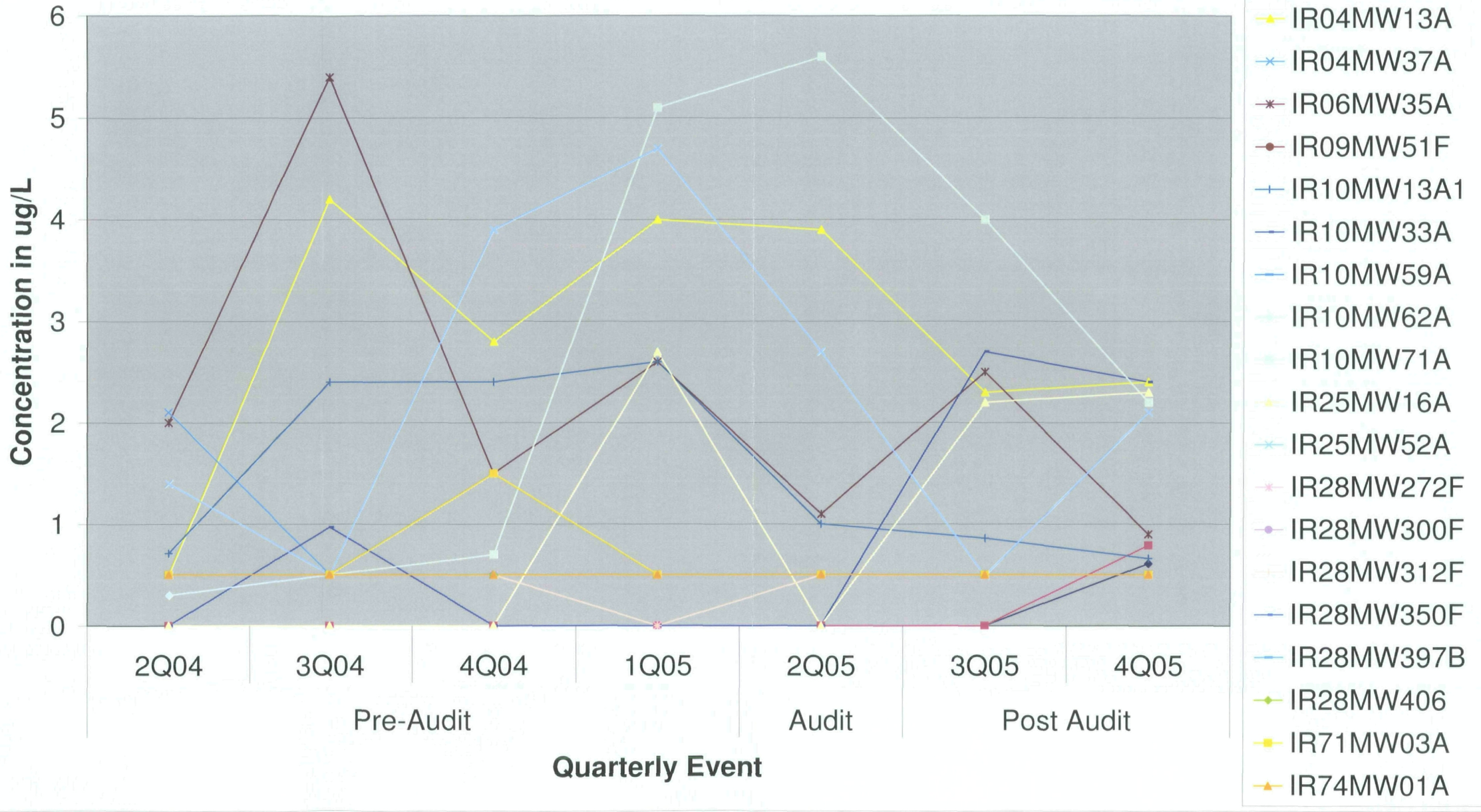
TCE Maximum Concentration 70 ug/L



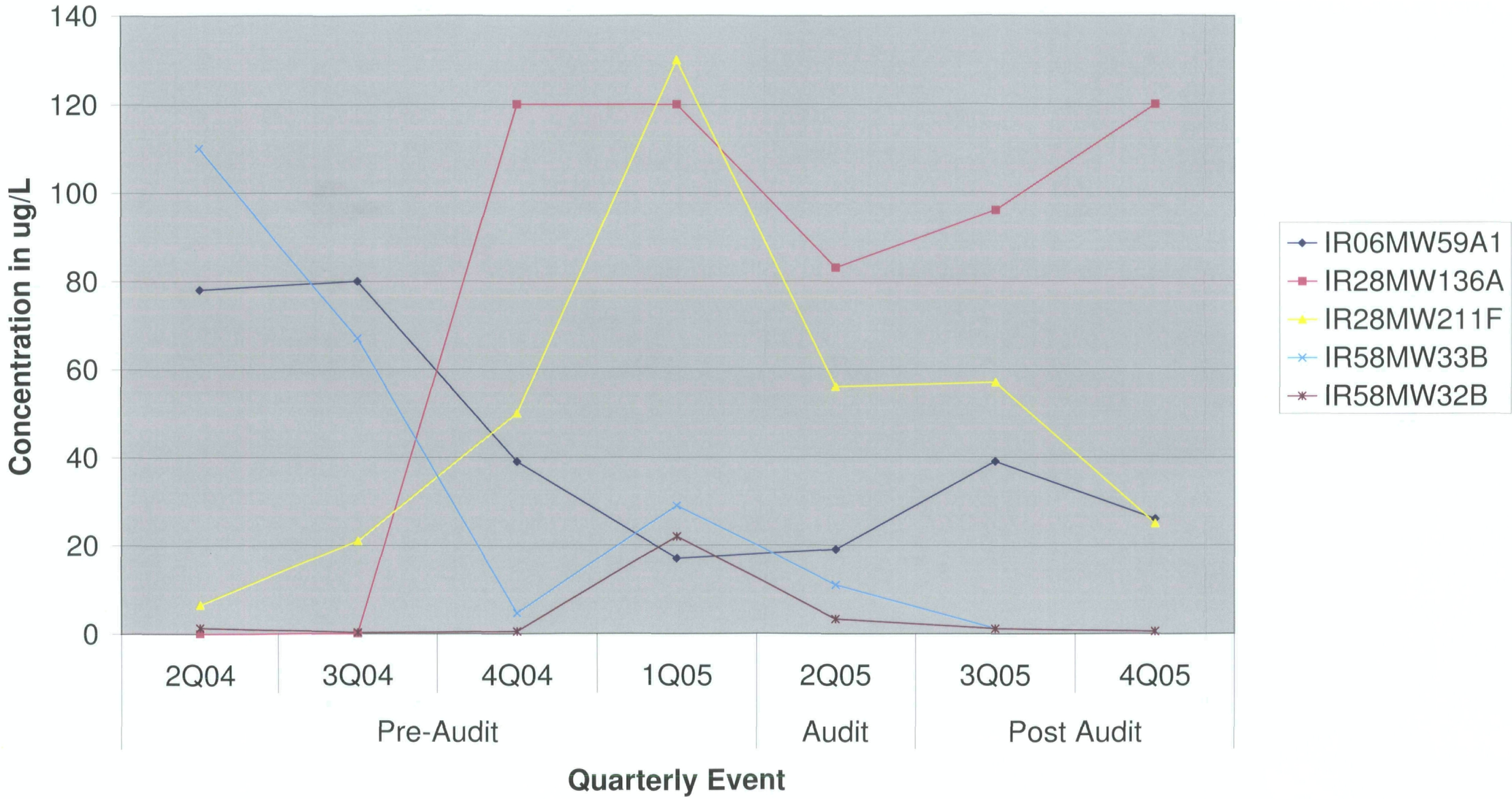
TCE Maximum Concentration Greater than 70 ug/L



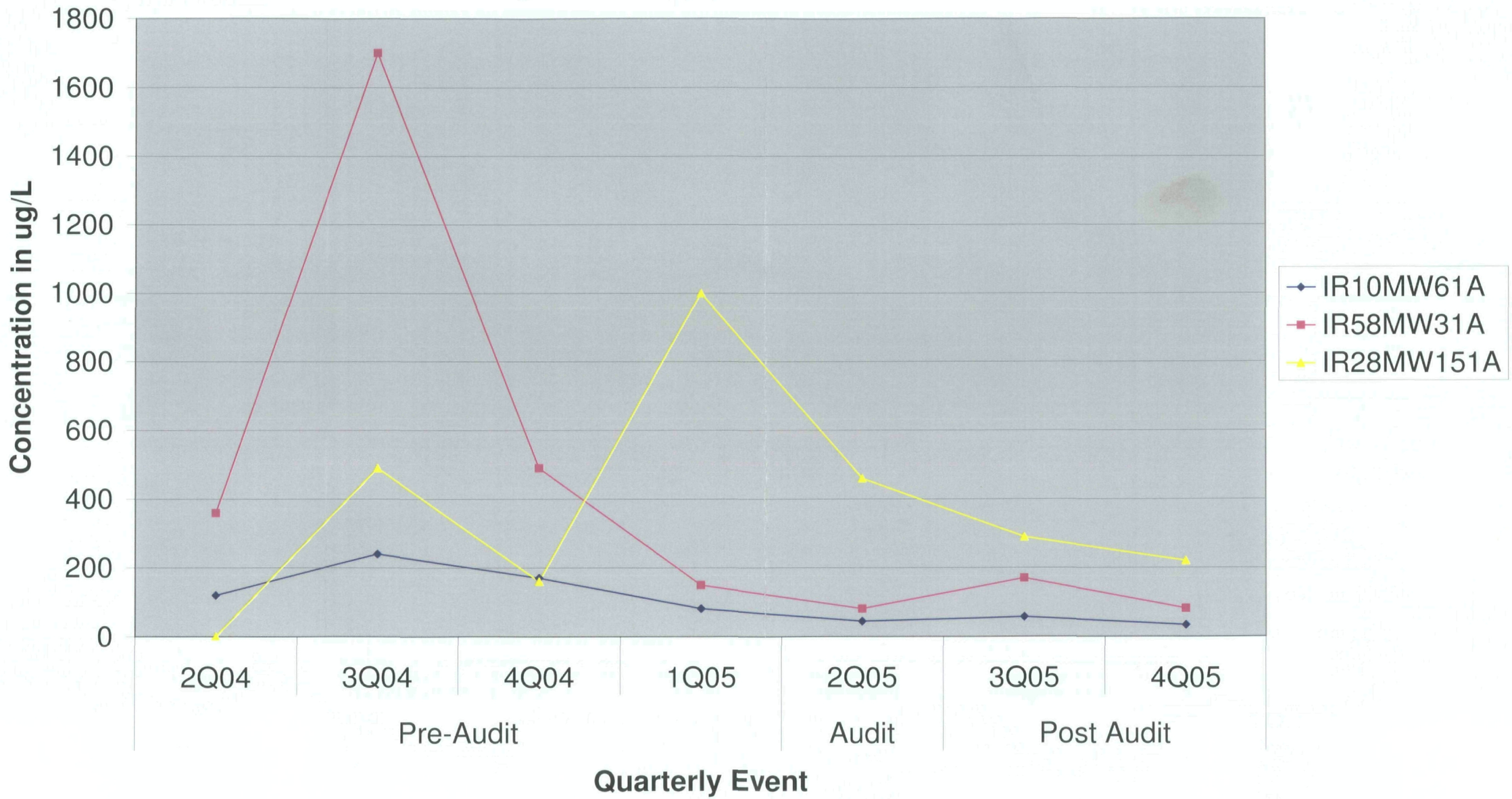
Vinyl Chloride Maximum Concentration 6 ug/L



Vinyl Chloride Maximum Concentration 130 ug/L



Vinyl Chloride Maximum Concentration Greater than 130 ug/L



Hi Ryan,

Attached, please find EPA's comments and observations regarding a field audit conducted by TechLaw, Inc (EPA's contractor) of the quarterly groundwater sampling program at Parcels C, D, and E, Hunters Point Shipyard. The purpose of the field audit was to evaluate whether the Navy's contractor is in compliance with approved procedures contained in the *Final Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan) Basewide Groundwater Monitoring Program*, Hunters Point Shipyard, San Francisco, California, August, 2004 (the SAP). The field audit was performed on June 28, 2005. The field audit findings were discussed at the 26 July HPS BCT meeting and the more urgent and salient of the comments were sent via e-mail to you and Pat on 22 August. Please find below the full audit report for your review.

Should you have any questions or require additional information, please contact me at (415) 972-3023.

James Ricks
SFD-8-1
Project Manager
U.S. Environmnetal Protection Agency
Region IX
Superfund Program
75 Hawthorne Street
San Francisco, CA 94105-3901
Office (415) 972-3023
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ricks.james@epa.gov

Observations

The field audit was conducted by TechLaw (Karla Brasaemle) on Tuesday, June 28, 2005 from 9:00 AM to 12:30 PM. A Regional Water Quality Control Board representative, Mr. Jim Ponton, was also on site to observe the groundwater sampling, until approximately 11:30 AM. Kleinfelder, Inc. (Kleinfelder) was the primary contractor under the supervision of Chris Johnson. Each sampling team included one Kleinfelder employee and an employee from Young Community Developers (YCD).

After an introductory health and safety briefing, Kleinfelder staff discussed their field office procedures. These procedures included sample management, packaging and shipping; field instrument calibration; and preparation of materials for each field team. Since no activities were being conducted at the time, it was not possible to determine if there are any audit issues. The procedures as described appeared to meet the requirements of the SAP.

TechLaw observed the activities of four out of five sampling teams; since it was nearly the end of the sampling program, the fifth team finished before they could be observed. The following

paragraphs discuss observations made during visits to the sampling teams. It should be noted that no single team was observed from start to finish (i.e., from arrival at a well through purging and sampling, decontamination, and transition to the next well).

The first field sampling team visited, consisting of Tom Sayre (Kleinfelder) and Robert (YCD), was observed from 9:40 to 10:00 AM. This team was finishing purging IR02MWB-1 (Parcel E). The team purged groundwater from the well using a Grundfos pump and low flow purge methods. Approximately 8 liters (L) were purged from the well and field parameters were measured every liter. These field parameters did not include photoionization detector (PID) measurements; PID measurements were only made when the well was opened. The field team used a table to hold sampling equipment, but sample bottles were stored in a box.

Several problems were noted. These problems included the fact that the field team did not have a copy of the SAP, Health and Safety Plan (HASP), or daily sampling schedule. When asked, the team stated that the field book and box of sample bottles determined their schedule. This team did not change gloves after purging and before beginning to sample. The sample was not collected at a sufficient flow rate to allow laminar flow because water was allowed to drip into the sample container, which is not recommended for metals or volatile organic compound (VOC) analyses. In addition, the filter was allowed to slip into the bucket being used for purge water. Finally, it was observed that the labels had not been attached to the bottles prior to sampling.

The second field sampling team, consisting of Gregorio Ramirez (Kleinfelder) and Neila Bradford (YCD), was observed from 10:03 to 10:35 AM. This team was purging and sampling IR03MW224A. Approximately 8 L of water were purged from this well, resulting in 0.2 foot of drawdown. When the audit team arrived, the generator was positioned upwind of the monitoring well and exhaust was blowing across the monitor well. The Navy was informed and the generator was moved downwind of the monitoring well. The TechLaw auditor had to remind the field team to change gloves after repositioning and restarting the generator.

Other problems observed included the team's difficulty keeping a constant purge or sampling rate; the fact that the field team did not have copies of the SAP, HASP, and sampling schedule; the collection of VOC samples in the wrong order; the lack of a cooler with ice for sample preservation; and the use of a Sharpie marker to record field data and fill out sample labels. It is unclear what analytes were sampled first because the sample bottles were not labeled, but the sampling team began filling 1 L amber glass bottles instead of VOCs as required by Section 8.3.4.3 of the SAP. The TechLaw auditor asked whether the field team had a cooler with ice so that samples could be placed on ice as soon as they were collected, as required by Section 8.3.4.3 of the SAP, but was informed that coolers were only used on hot days because the sample team would drive back to the field trailer with the samples as soon as they were done sampling. It was noted that about 15 minutes after asking this question, a cooler with ice was brought to the field team at the request of the Navy. Sharpie markers should not be used to record field parameters or to fill out labels because of the VOCs present in the Sharpie ink; Section 8.4.2 of the SAP requires that indelible ink be used to fill out sample labels.

The third field sampling team visited consisted of Mark Swank (Kleinfelder) and Isaako Tapelu (YCD). This team finished purging, sampled well IR04MW37A for VOCs, and began

decontamination procedures while being observed from 10:55 to 11:10 am. This team generally used proper procedures during the time they were observed. Approximately 8.4 L were purged from the well and VOC sampling was done with a smooth laminar discharge from the pump. Sample bottles were placed into a ziploc bag as soon as they were filled and placed on ice as soon as the labels were applied. When the pump was pulled from the well, the dedicated tubing was not allowed to touch the ground. Decontamination procedures included an alconox and water wash, tap water rinse, and deionized water final rinse. The water level indicator was decontaminated using the procedure noted above and dried with a paper towel as the tape was rewound onto the spool. The pump was submersed and allowed to run for 5 minutes in each bucket. The only problems observed were the lack of SAP and HASP copies, the application of sample labels to the bottles after samples were collected, and the fact that the well was not closed immediately after the pump was removed and dedicated tubing was replaced in the well.

The fourth sampling team visited consisted of Dan Eldredge (Kleinfelder) and Bobby Wilson (YCD). This team was observed from 11:43 AM to 12:25 PM, while they purged and sampled PA36MW07A. Unlike the other teams, this team had a few pages from the SAP, which they used to check that field parameters had stabilized before sampling. During purging, the well was allowed to draw down 1.7 feet of the 13.5-foot water column. Some equipment was decontaminated before sampling began. Gloves were changed after purging and before the sample was collected and the flow of water into the VOC sample vials was observed to be laminar. Samples were placed on ice after the sample was collected. The only problems observed were that sample bottles were kept in a box in the sun and that the well was not capped immediately after removal of the pump and replacement of the dedicated tubing. It is not known if the sampling team had a copy of the HASP.

Discrepancies and Recommendations

Issues observed that were not in accordance with standard industry practices included the use of Sharpie markers and failure to ensure that the exhaust of the generator was downwind of the monitoring well. These issues could impact data quality and result in contamination of sampling containers. It is recommended that a protocol be implemented to ensure that generator exhaust is always downwind of the monitoring well; field teams should be aware that if they smell generator exhaust, the generator needs to be moved. Further, since Sharpie markers contain VOCs, they should not be used in the field; the SAP requires use of indelible ink.

Several problems could potentially impact data quality and usability and may be related to unfamiliarity with the SAP and to the fact that field teams did not have copies of the SAP:

1) With one exception, the field sampling teams did not have copies of the SAP and did not follow the SAP requirement to evaluate whether parameters had stabilized before samples were collected. It is necessary to ensure that field parameters stabilize during well purging in order to ensure that samples are truly representative of aquifer conditions. Field teams should have copies of relevant pages of the SAP and should be trained to evaluate field parameter stabilization and ensure that parameters have stabilized before sampling begins.

2) Samples were not collected in the order required by the SAP when there were multiple analytes. VOC samples should be collected first as required by the SAP to ensure that there is sufficient water in the well and that the samples are representative of aquifer conditions (e.g., less chance for volatilization to occur).

3) Some samples were collected at too low a flow rate, based on observations that water dripped into the sample bottle. This practice could result in loss of VOCs and oxidation of metals. Laminar flow rates should be maintained for all analytes during sampling.

4) Sample containers were kept in a box in the sun and then samples were not placed immediately on ice after samples were collected by the first two teams. Based on discussions with these field teams, it was standard protocol to keep samples in a cardboard box except on very hot days. Since samples were collected into warm containers and not chilled immediately after collection and it took some time for teams to decontaminate equipment and leave a well location, it is possible that sample integrity and VOC concentrations were compromised. Sample containers should be kept in the coolers with ice until the sample is collected and filled sample containers should immediately be placed in a cooler on ice as soon as the sample is collected.

5) Bottles should be labeled before sampling begins. This will help ensure that samples are collected in the order required by the SAP.

Finally, to further improve data quality, it is recommended that field teams listen to evaluate whether water can be heard cascading into the well screen when drawdown of more than 10 percent of the water column height occurs. EPA has raised this issue several times in comments on the SAP and quarterly groundwater reports. If water is heard cascading into the well screen, field teams should record this observation.

Conclusion

The field audit determined that the Navy contractor is not in general compliance with the requirements of the SAP, although one sampling team was generally in compliance. This appears to be due to the fact that the field teams are unfamiliar with the requirements of the SAP and do not have relevant pages from the SAP with them in the field. The discrepancies discussed above may impact data quality for groundwater sampling.

Time Critical Removal Action Update Hunters Point Shipyard

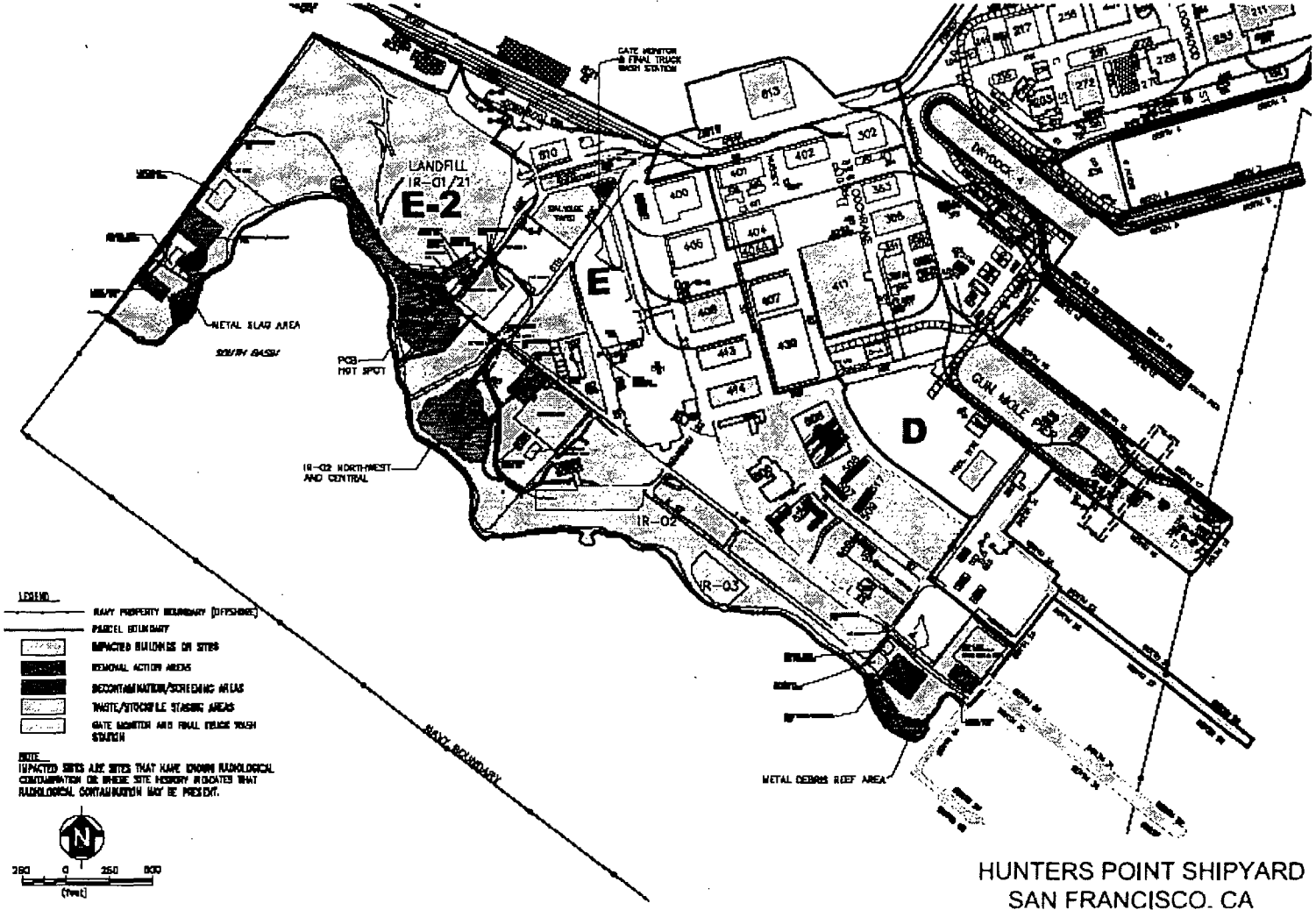
Base Closure Team Meeting

April 25, 2006

Presentation Objectives

- Provide a status update for the TCRA sites:
  - Metal Slag Area
  - Metal Debris Reef
  - PCB Hot Spot
  - IR-02
- Review upcoming TCRA site activities.

TCRA Update: Site Locations

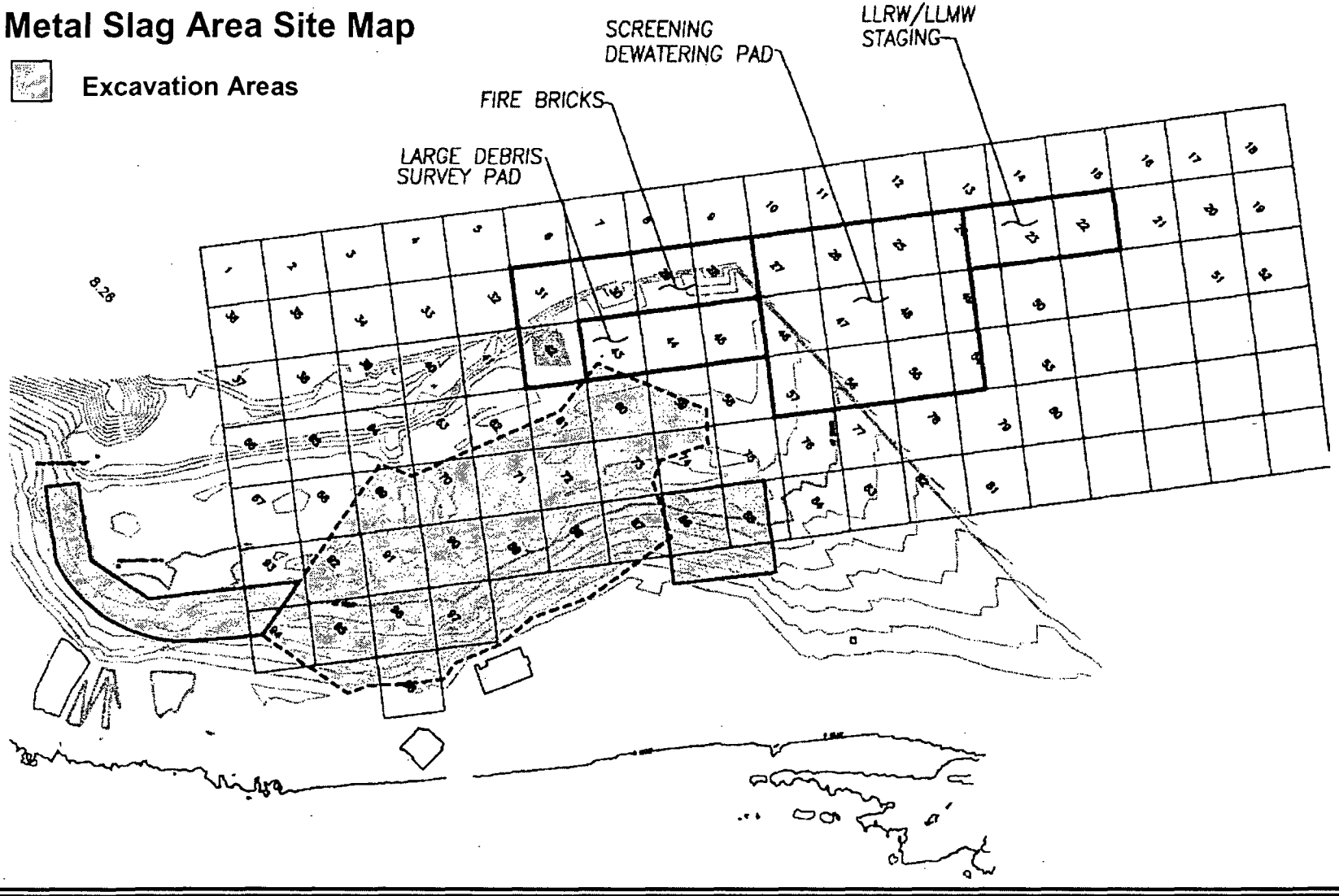


HUNTERS POINT SHIPYARD
SAN FRANCISCO, CA

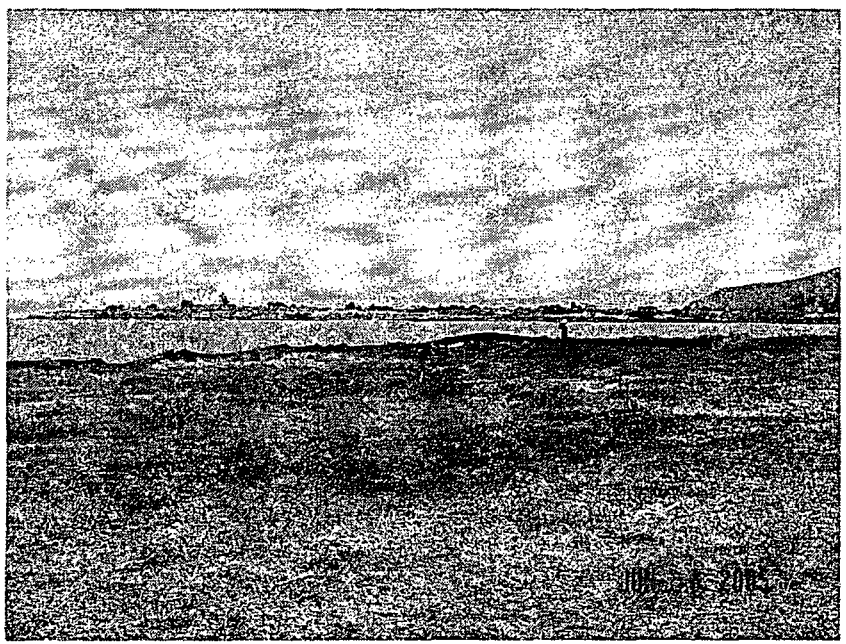
Metal Slag Area

Metal Slag Area Site Map

Excavation Areas



Metal Slag Area



Metal Slag Area Prior to Excavation

Metal Slag April 2006

Metal Slag Area

Progress

- 8,200 cubic yards removed (original estimate was 5500 cy)
- 8,300 cubic yards rad-screened to date

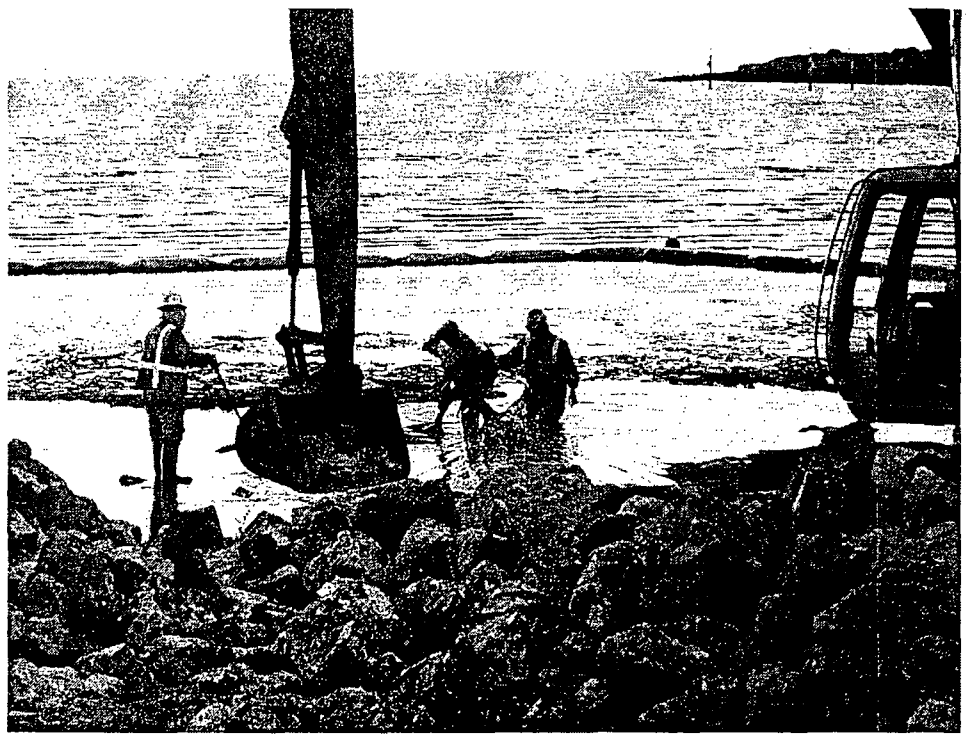
Upcoming Activities

- Complete removing discontinuous metal slag material.
- Continue work on the Draft Wetland Mitigation Plan

Metal Slag Area

Radiological Survey Results to Date

- Radiological soil/sediment - 5 bins (62 cy)
- Radiological devices: 32
- 15 cubic yards of radiological materials/debris including 9 cubic yards of firebrick



Armor Rock Placement

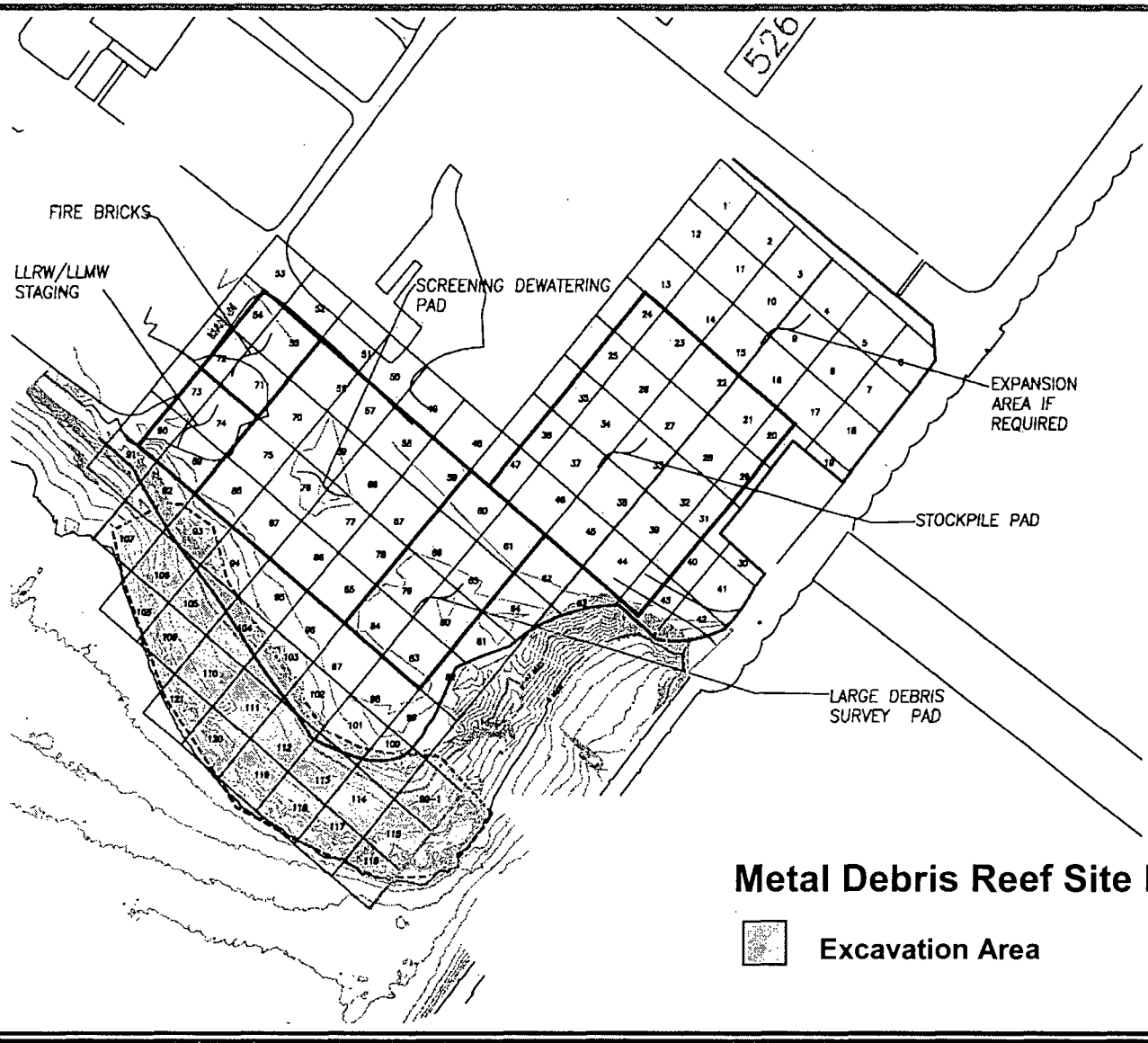
Metal Slag Area

Other Observations

- General debris - approximately 50 cubic yards
- Storm water pollution control measures are inspected and upgraded or repaired as needed
- 6 bins (75 cy) of rad-contaminated soil transported off site.
- 80 cubic yards removed from areas of discontinuous metal slag

Backfilling

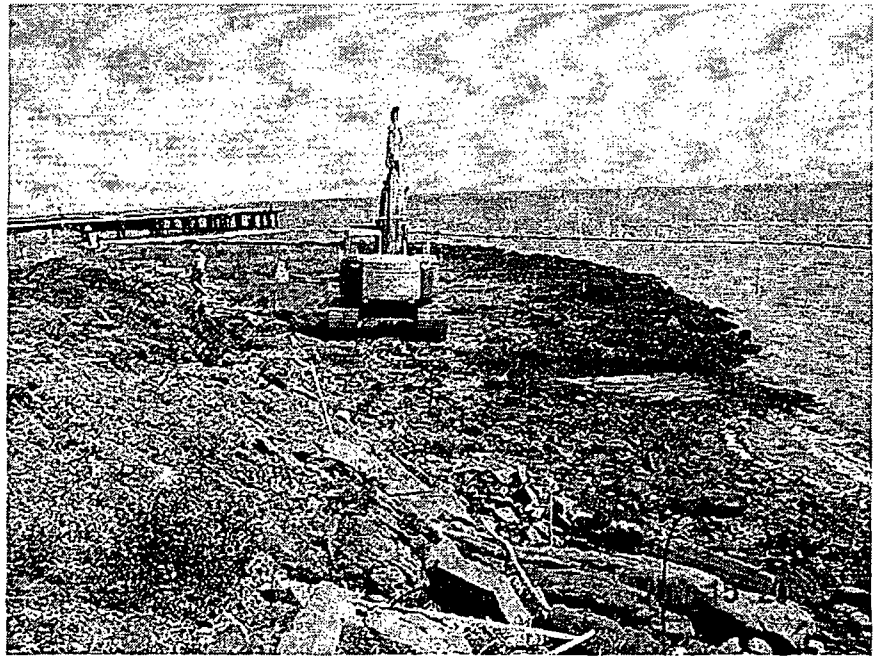
Metal Debris Reef



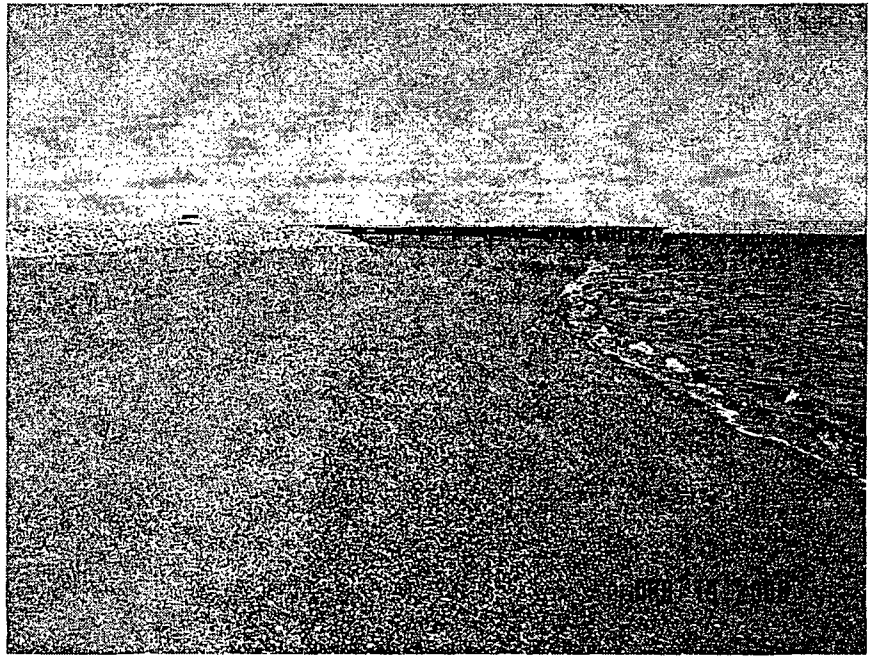
Metal Debris Reef Site Map

Excavation Area

Metal Debris Reef



Metal Debris Reef
Prior to Excavation



Metal Debris Reef April 2006

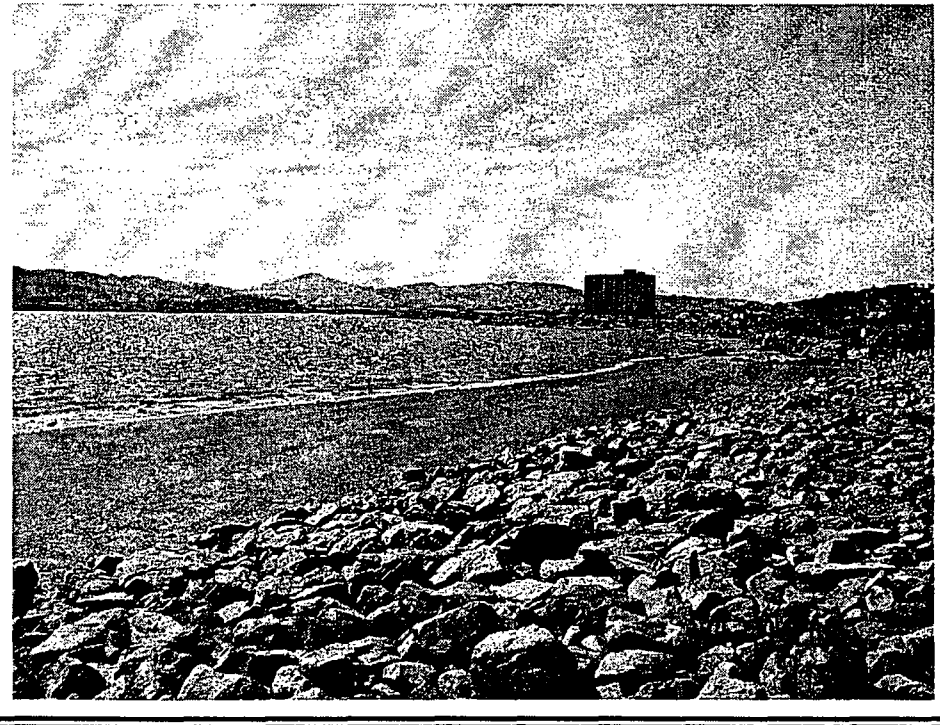
Metal Debris Reef

Progress

- 11,200 cubic yards removed (original estimate was 8500 cy)
- 7,640 cubic yards rad-screened to date
- 3,000 cubic yards non-rad soil transported offsite

Upcoming Activities

- Continue soil and debris screening
- Complete evaluation of long-term shoreline stabilization



Metal Debris Reef

Radiological Survey Results to Date

- Radiological soil/sediment - 45 bins (562 cy)
- Radiological soil/sediment – 43 bins (537 cy) shipped offsite
- Radiological devices: 115
- Radiological materials/debris- approximately 2 cubic yards

Soil Stockpiles

Metal Debris Reef

Other Observations

- General debris - tires, telephone pole-sized timber, rock, boulders, corroded metal drum shells, spent shell casings (approximately 125 cy)
- Storm water pollution control measures are inspected and upgraded or repaired as needed
- One bin of firebrick (12.5 cubic yards) shipped off site

PCB Hot Spot

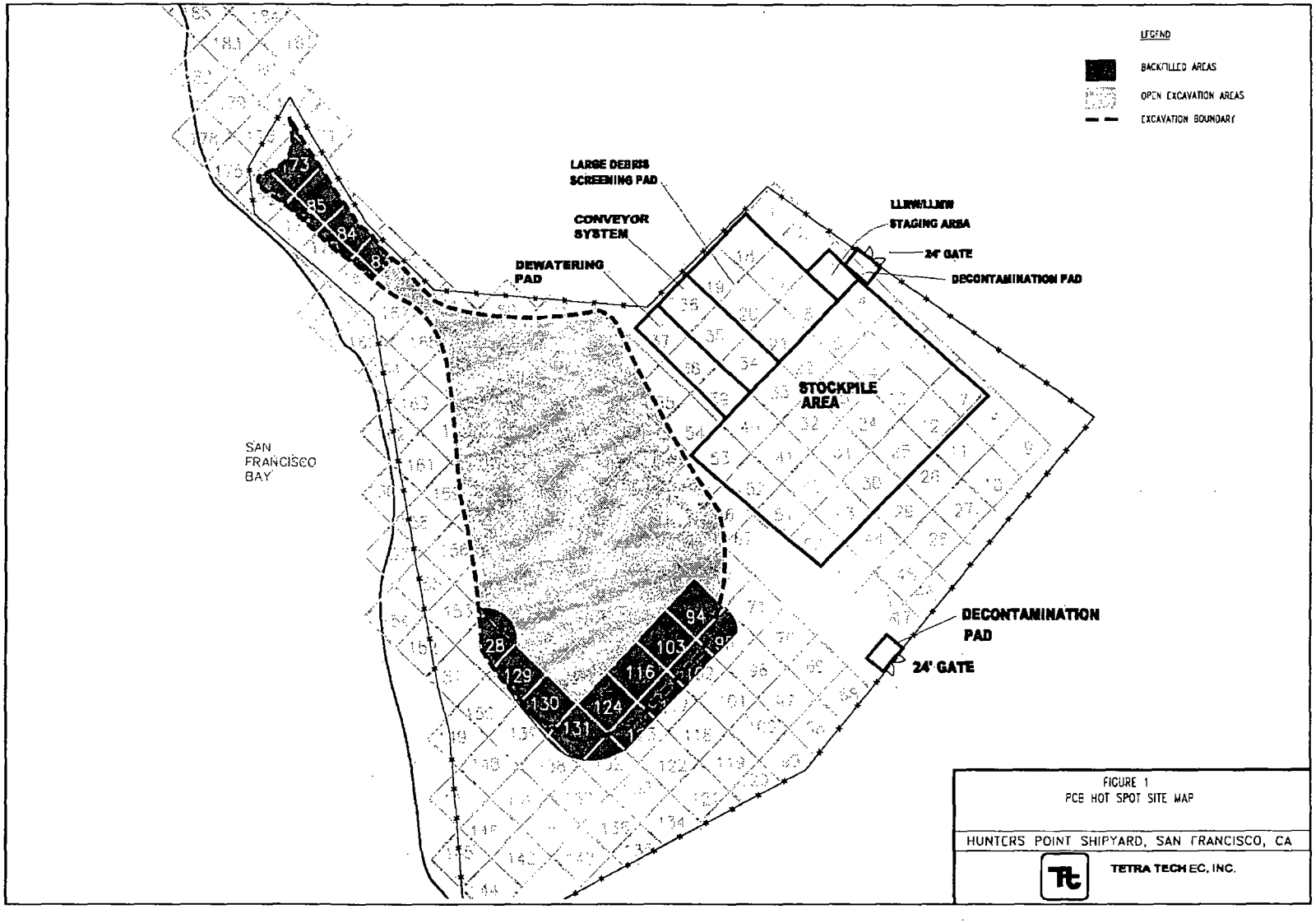
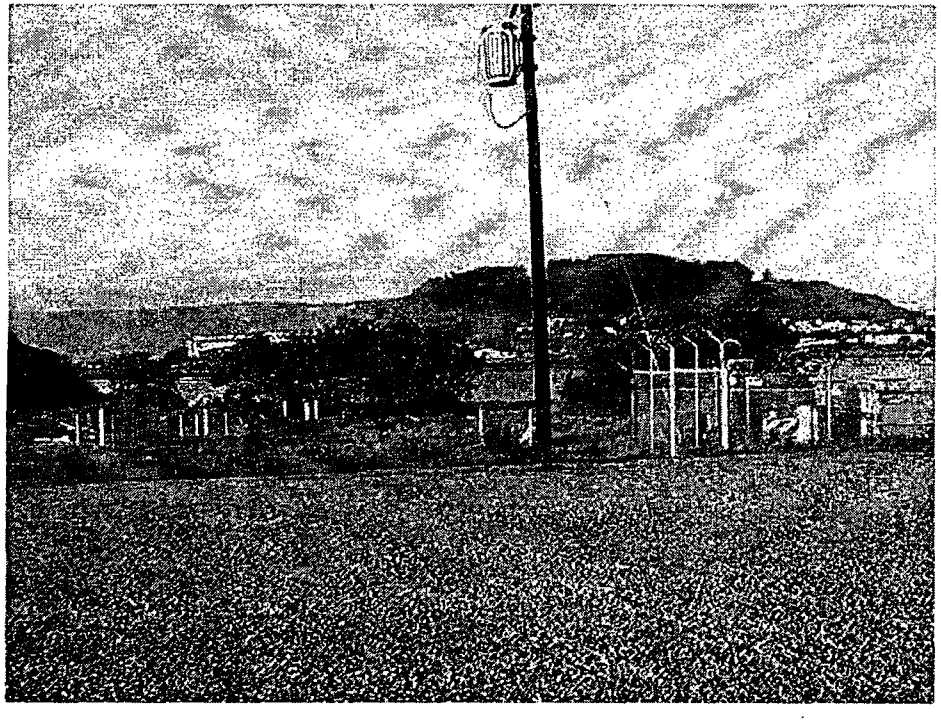


FIGURE 1
PCB HOT SPOT SITE MAP

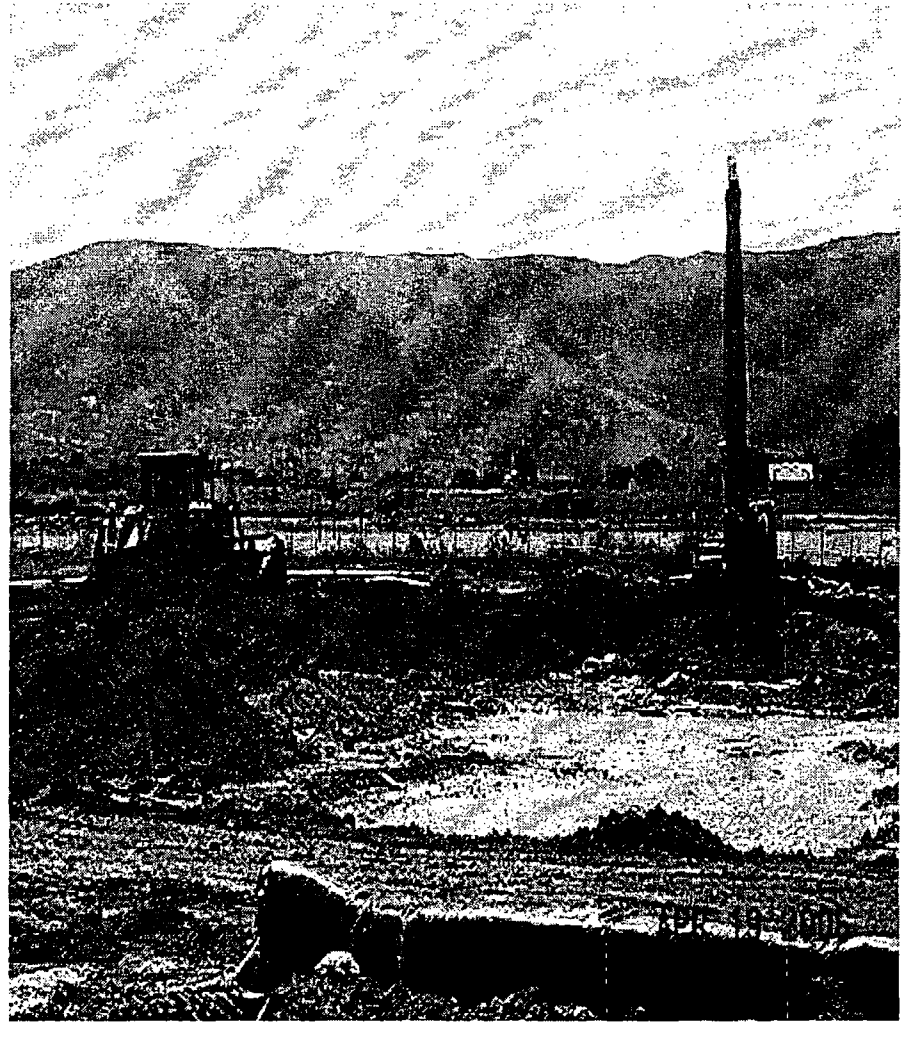
HUNTERS POINT SHIPYARD, SAN FRANCISCO, CA

TETRA TECH EC, INC.

PCB Hot Spot



PCB Area Prior to Excavation

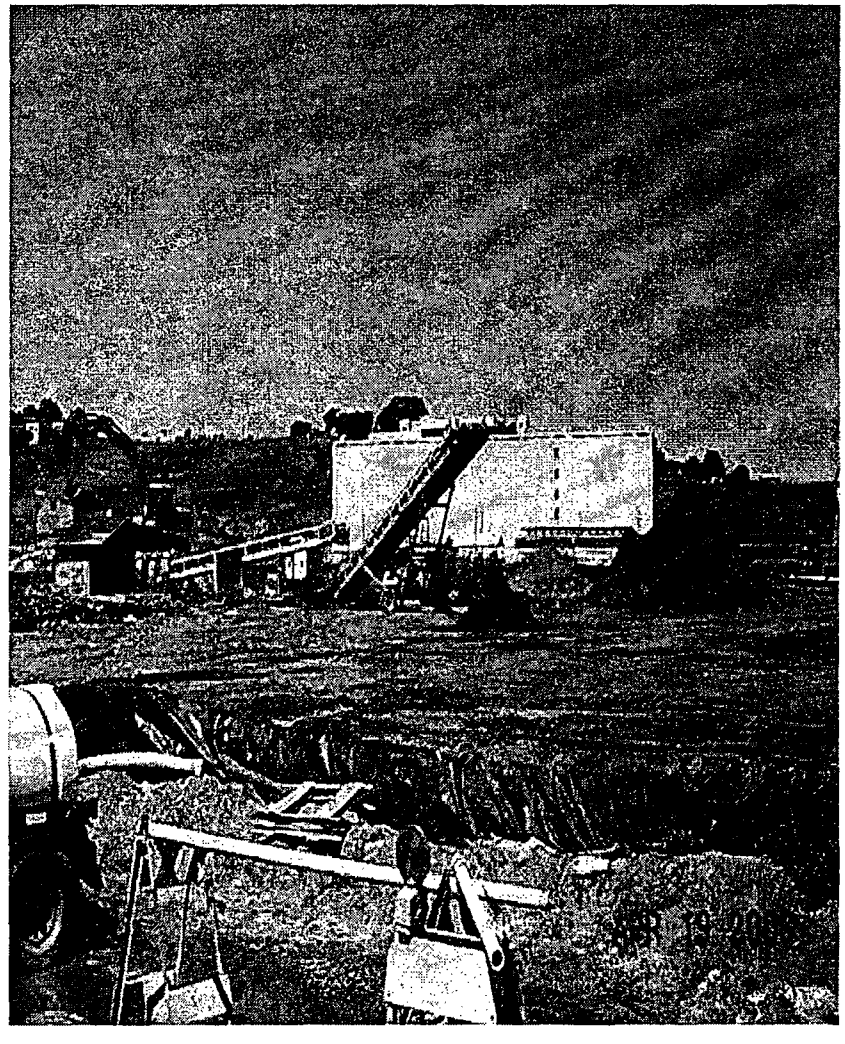


PCB Area April 2006

PCB Hot Spot

Progress

- 25,250 cubic yards removed (total estimate is 31,000 cy)
- 26,600 cubic yards rad-screened to date
- Initiated "potholing" southwest of excavation area
- Oily soil and groundwater present at 10 feet bgs



PCB Hot Spot

Radiological Survey Results to Date

- Radiological soil/sediment - 8 bins (123 cy)
- 4 bins of firebrick
- Radiological devices: 25
- Radiological debris: 20

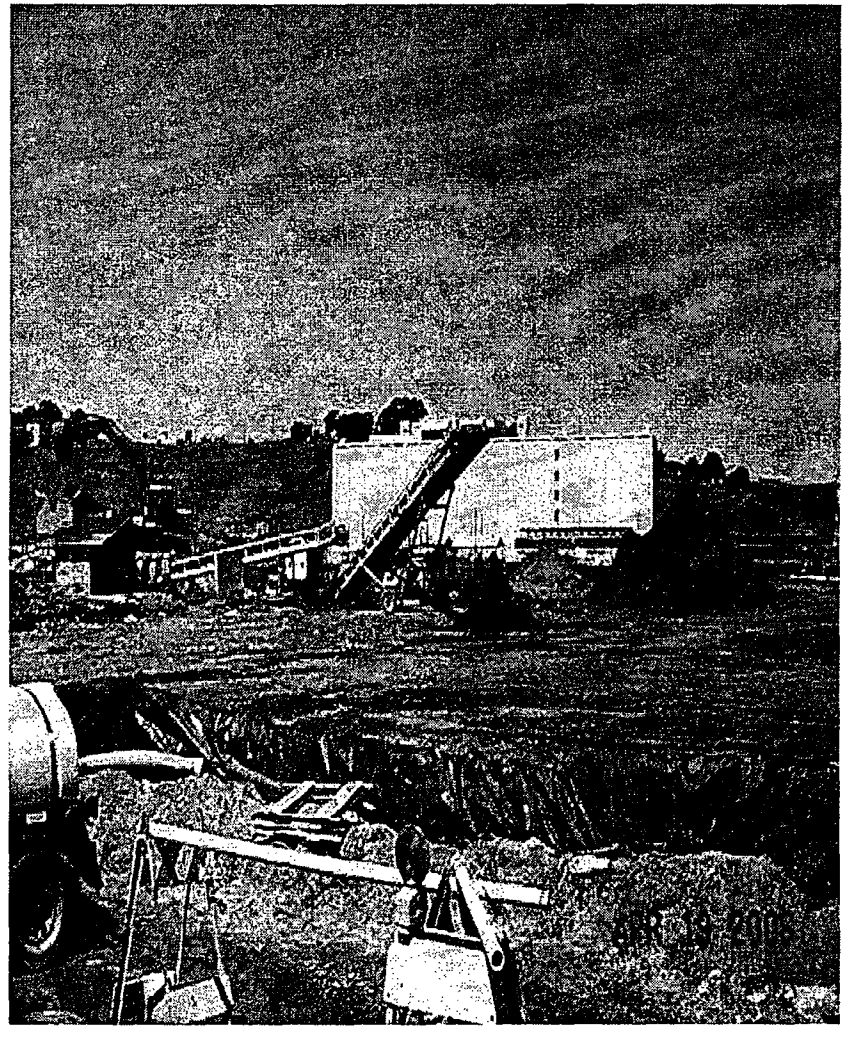
Non-Radiological Results to Date

- 23,000 cy of soil with PCBs transported offsite
- 640 cy of large debris transported off-site
- 120 drums and 505 assorted waste containers recovered

PCB Hot Spot

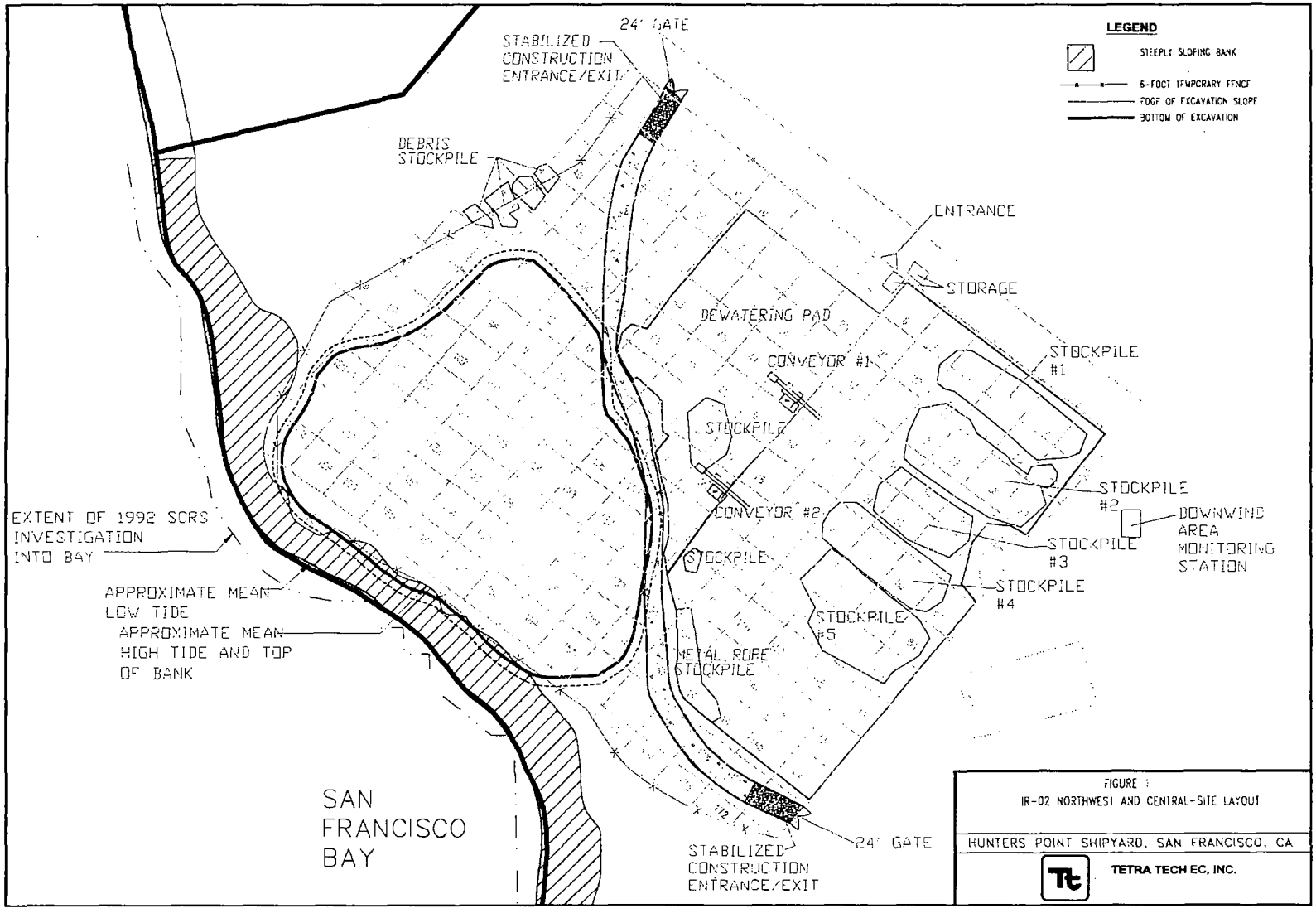
Upcoming Activities

- Screening and processing of soil
- Restart soil excavation
- Backfill clean grids
- Complete Hazcat and rad screening of assorted waste containers
- Storm water pollution control measures are inspected and upgraded and/or repaired as needed

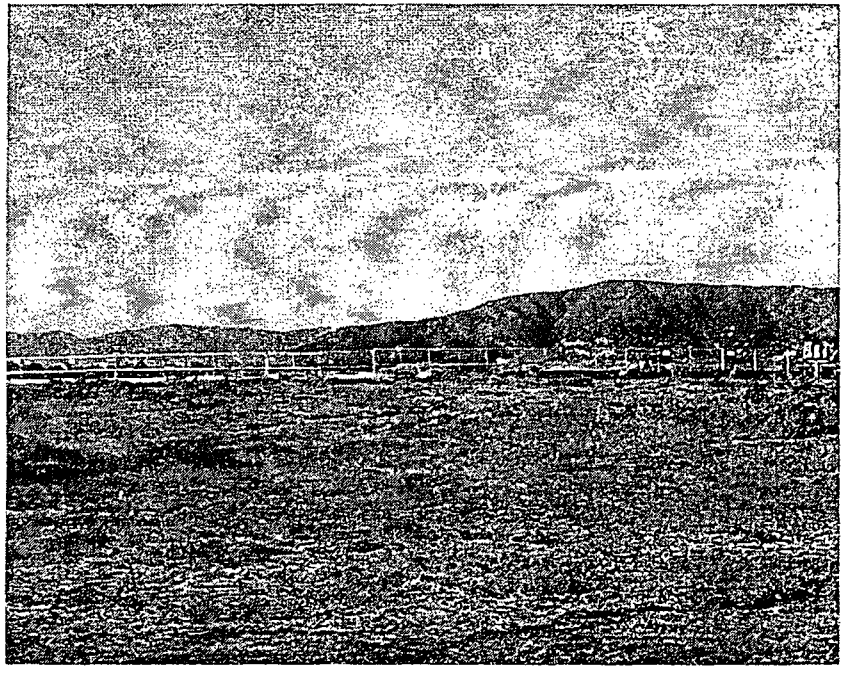


Radiological screening of soil

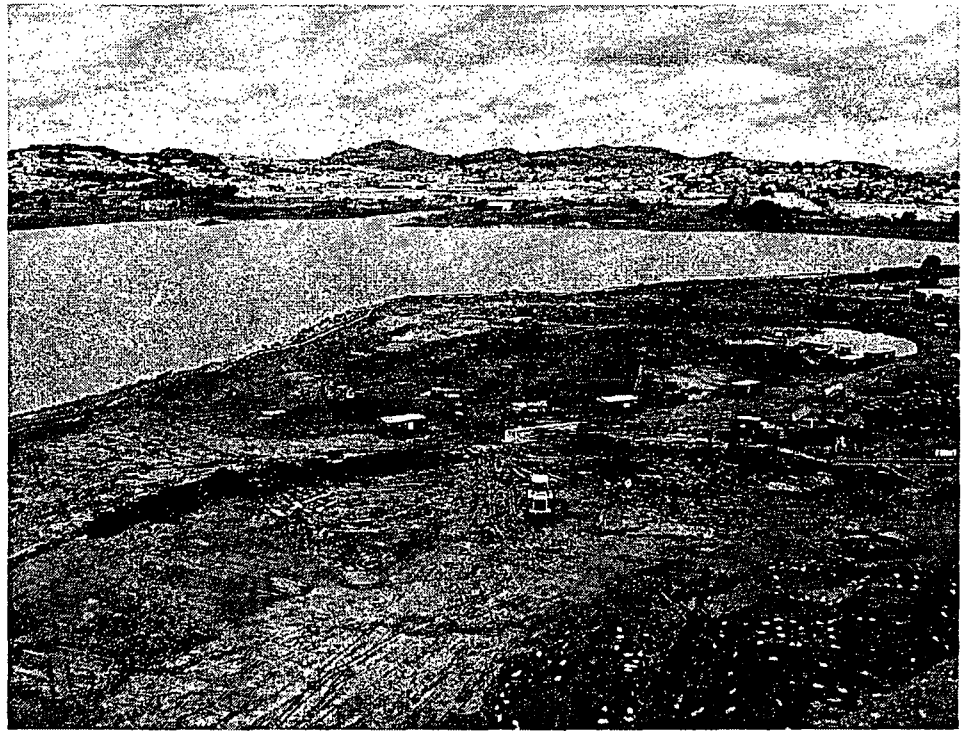
IR-02 Northwest and Central



IR-02 Northwest and Central



IR-02 Prior to Excavation



IR-02 April 2006

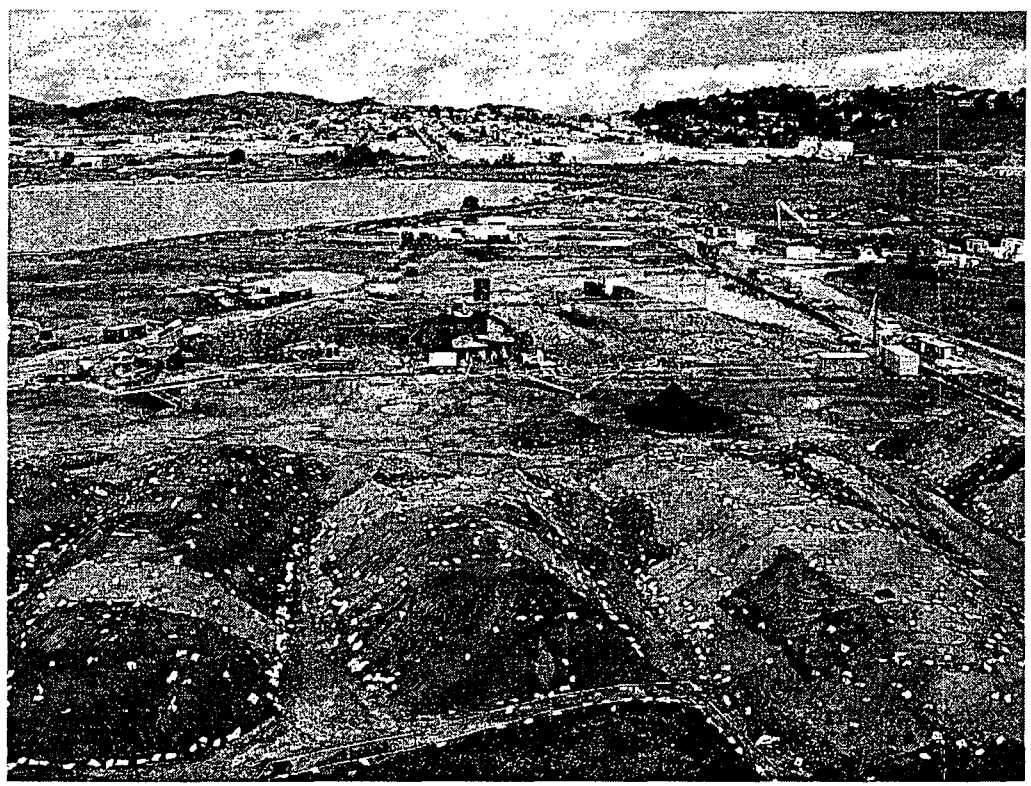
IR-02 Northwest and Central

Progress

- 22,920 cubic yards removed (total estimate at completion is 44,100 cubic yards); currently at 5-6 feet bgs
- 23,950 cubic yards rad-screened to date

Upcoming Activities

- Continue soil and debris screening
- Continue excavating to 10 feet bgs



IR-02 Northwest and Central

Radiological Survey Results to Date

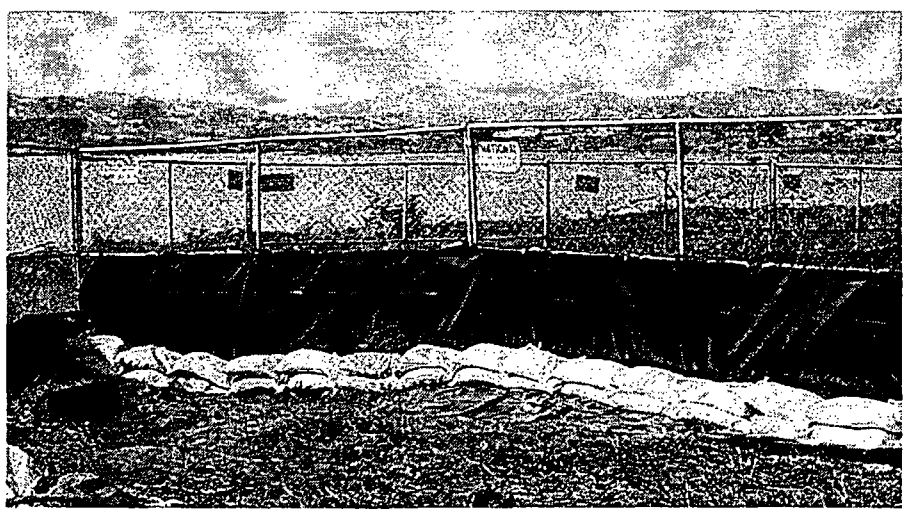
- Radiological soil/sediment - 301 bins (3,771 cubic yards)
- Radiological devices: 1,195
- Radiological materials and debris: 100 pieces
- Firebrick – 8 bins (100 cy)

Loading a Waste Bin at IR-02

IR-02 Northwest and Central

Other Observations

- 1,813 cubic yards of general debris including large rocks, asbestos-containing materials, concrete, crushed drums, scrap metal, and spent shell casings
- Stormwater pollution control measures are inspected and upgraded or repaired as needed.
- 203 bins rad-contaminated soil transported off site



Storm Water Control Measures Along Northwest Fenceline

What's Next at the TCRA Sites

MDR/MSA

- –Move silt curtain at MSA and complete excavation in areas with discontinuous metal slag (April).
- –Complete soil scanning at MDR and MSA (May).
- –Submit Draft Wetland Restoration Work Plan (June).

PCB Hot Spot

- –Complete excavation and soil screening (July).
- –Complete backfill/site restoration (July).

IR-02

- –Complete excavation and soil screening (July).
- –Complete backfill/site restoration (August).

DEPARTMENT OF THE NAVY
BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE WEST
1455 FRAZEE RD, SUITE 900
SAN DIEGO, CA 92108-4310

5090
Ser BPMOW.jep/1503
21 Dec 05

FWSD-04-1623
CTO No. 72

Mr. Rodney McInnis
Regional Administrator, Southwest Region
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
501 West Ocean Blvd., Suite 4200
Long Beach, CA 90802-4213

SUBJECT: METAL SLAG AREA REMOVAL ACTION, IN-WATER WORK OUTSIDE OF IN WATER WORK WINDOW, HUNTERS POINT SHIPYARD, SAN FRANCISCO, CA

Dear Mr. McInnis:

The Department of the Navy (DON) is conducting a removal action to remove radiological contamination associated with metal slag and debris at the Metal Slag Area (MSA) in Parcel E-2 at Hunters Point Shipyard (HPS), San Francisco, California. DON is responsible for minimizing the potential environmental consequences of the proposed removal action associated with radiological contamination. The original scope off work to be completed and the mitigation measures to be implemented were detailed in a March 7, 2005, letter to the National Oceanic and Atmospheric Administration (NOAA). NOAA responded with a concurrence letter on August 29, 2005.

The HPS property was placed on the National Priorities List in 1989 as a Superfund site pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act. This project is part of the DON's responsibility under the Installation Restoration Program (IRP) and CERCLA. The DON has identified substantive provisions of the Endangered Species Act (ESA) as Federal Applicable or Relevant and Appropriate Requirements (ARARs) for the proposed site remediation actions pursuant to Section 121(e) of CERCLA.

Project Location

The project islocated within the United States Geological Survey (USGS) Hunters Point quadrangle sheet in Township 2 South, Range 4 West. HPS is located in the City and County of San Francisco, California on a long promontory in the southeastern part of San Francisco that extends east into San Francisco Bay (Bay). HPS consists of 852 acres, 432 of which are in water. MSA is located in the southwestern portion of Parcel E-2 (Figure 1).

Environmental Regulatory Requirements

This project is part of the DON's responsibility under the IRP and CERCLA. In accordance with Section 121(e) of CERCLA 1980 [CERCLA, 42 United States Code (USC), Section 9621(e)], as amended, which states that no federal, state, or local permits shall be required for the portion of any removal or remedial action conducted entirely on site, the work activities to be conducted do not require permits since the work is being conducted entirely on site and

supports implementation of the time critical removal action (TCRA). However, the substantive requirements of the applicable regulations will still be followed to the extent practicable.

In-Water Work

The proposed projects at HPS will have a long-term "BENEFICIAL EFFECT" on species and habitats protected under the ESA by increasing vegetative diversity classifications during site restoration activities and the eliminating contamination at the site. The proposed activities at HPS will substantially eliminate previously identified pathways of exposure to hazardous substances for human and ecological receptors protected under ESA. Debris and impacted materials are being removed as a result of the proposed actions at HPS to substantially eliminate the potential threat posed by future migration or release of low-level radioactive materials to the surrounding environment (including but not limited to ESA-listed and candidate species). Such a release could occur as a result of erosion, weathering, seismic events, or biological activity.

The June 1st to November 30 in-water work windows was used to initiate the removal action within the MSA. However, more metal slag was encountered than anticipated, and, in-water work at MSA is proposed to continue into January 2006. The remaining in-water work will require the removal of approximately 300 cubic yards of material. Four ESA federally protected fish species have been identified as having the potential to be found in the vicinity of the project areas. Those species include:

- Central Valley Spring Run Chinook Salmon (*Oncorhynchus tshawytscha*)
- Sacramento River Winter Run Chinook Salmon (*Oncorhynchus tshawytscha*)
- Central California Coast Steelhead (*Oncorhynchus mykiss irideus*)
- Central California Valley Steelhead (*Oncorhynchus mykiss irideus*)

Although the proposed activities are not likely to adversely affect the four ESA protected fish species potentially occurring within Parcel E-2 at HPS, potential habitat, albeit marginal/sub-marginal, exists within the vicinity of the project areas. Therefore, in the unlikely scenario that any of the four ESA protected fish species are detected during project implementation, a biological monitor will be on site during intrusive site activities, mobilization, and demobilization to contact the DON, U.S. Fish and Wildlife Service, or National Marine Fisheries Service immediately and determine the best course of action to avoid/minimize disturbance.

In addition, the MSA removal action will use strategies for avoidance and mitigation of potential adverse effects to species protected under the ESA and other applicable regulations. Those strategies include:

- Utilize silt curtains. The silt curtain will be moved to the newly identified work areas prior to any in-water work. The silt curtain will reduce the potential for release of suspended silt into San Francisco Bay.
- Monitor the inside of silt curtain and minimize fish capture. This will be accomplished by monitoring the area enclosed by the silt curtain and adjusting the silt curtain if needed, during the lowest feasible tides.

- Minimize area enclosed by silt curtain. The silt curtain will surround the least amount of area possible while still complying with site-specific work plans.

Determination

Central California Valley steelhead, Central California Coast steelhead, Central Valley Spring Run Chinook salmon, and Sacramento River Winter Run Chinook salmon lack functional spawning habitat within Parcel E-2, and offshore activities have a low potential for encounters with adults and juveniles. In addition, specific breeding substrate conditions do not exist in the project work areas. Although no salmon or steelhead are known to reside or spawn within the project sites at HPS, due to the migratory nature of these species, salmon/steelhead could potentially pass through the project areas as they transition from fresh to saltwater and vice versa. As a result of the transitory nature of these species, the shallow water habitats throughout the Bay and along HPS provide a potential feeding and refuging environment for migrants. Intrusive offshore remediation activities associated with the project include limited sediment removal activities; the resultant sediment suspension/turbidity, noise, vibration, and so forth are expected to be "DISCOUNTABLE." However, total habitat avoidance is not practical; therefore the proposed projects "MAY AFFECT, BUT ARE NOT LIKELY TO ADVERSELY AFFECT," Central California Valley steelhead, Central California Coast steelhead, Central Valley Spring Run Chinook salmon, and Sacramento River Winter Run Chinook salmon. The DON asks for your concurrence to continue the removal action with the additional strategies for avoidance and mitigation of potential adverse effects to the environment.

Sincerely,

Douglas MacLeod

Cc:
KEITH FORMAN
BRAC Environmental Coordinator
By direction of the Director

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802- 4213

JAN 17 2006

In response refer to:
151422SWR2005SR00847:DPW

Keith Forman
BRAC Environmental Coordinator
U.S. Department of the Navy
Southwest Division
Naval Facilities Engineering Command
1220 Pacific Highway
San Diego, California 92132-5190

Dear Mr. Forman:

Thank you for your letter of December 21, 2005, which requests concurrence with the U. S. Department of Navy's (Navy) determination regarding potential effects to listed salmonids from ongoing activities as part of the Time Critical Removal Action of radiological contamination and site restoration along the shoreline of Parcel E, Hunters Point Shipyard (HPS), located adjacent to San Francisco Bay in the City and County of San Francisco, California. In 1989, HPS was placed on the National Priorities List as a superfund site pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This project is part of the Navy's responsibility under the Installation Restoration Program and CERCLA. The Department of Defense has the authority to undertake CERCLA response actions under 42 USC §9604, 10 USC §2705, and federal Executive Order 12580.

On August 29, 2005, NMFS concluded informal consultation for this project pursuant to section 7 of the Endangered Species Act (ESA). At that time, the proposed removal of metal-contaminated sediments in two intertidal areas was determined to not likely result in adverse effects to listed salmonids during a proposed work window of June 1 through November 30. However, the Navy was unable to remove all of the metal-contaminated sediment at one site (Metal Slag Reef) prior to November 30, 2005, and now proposes to excavate approximately 300 cubic yards of metal-contaminated sediment for transportation to an upland disposal site during January, 2006.

Metal Slag Reef is located within and above an intertidal area along the shore of San Francisco Bay. The sediment proposed for removal contains metal wastes, possibly originating from a foundry and smelter that once operated at the shipyard. Approximately 300 cubic yards of

excavated metal-contaminated sediment will be transported to an upland disposal site. Following excavation of the material, a minimum of three feet depth of sand will be deposited at the site. In order to minimize potential impacts to listed salmonids and the aquatic environment, the Navy is proposing to surround the in-water portion of the site with a silt curtain. The Navy proposes to install the silt curtain during the lowest feasible tide. The use of a silt curtain will prevent listed salmonids from entering the area during work and minimize the potential for release of suspended sediment into the surrounding aquatic environment. Your letter states that the Navy has determined that activities associated with this project are not anticipated to adversely affect listed salmonids or their habitat.

Available information indicates that the following listed species (Evolutionarily Significant Unit or Distinct Population Segment) may occur at the project site:

Sacramento River winter-run Chinook salmon ESU (*Oncorhynchus tshawytscha*)
endangered (June 28, 2005, 70 FR 37160)
Central Valley spring-run Chinook salmon ESU (*Oncorhynchus tshawytscha*)
threatened (June 28, 2005, 70 FR 37160)
Central California Coast steelhead DPS (*Oncorhynchus mykiss*)
threatened (effective February 6, 2006)
Central Valley steelhead DPS (*Oncorhynchus mykiss*)
threatened (effective February 6, 2006)

Critical habitat has recently been designated in south San Francisco Bay for Central California Coast steelhead. The rule became effective on January 2, 2006 (70 FR 52488).

The salmonids listed above use San Francisco Bay primarily as a migration corridor en route to the Pacific Ocean to rear as juveniles or to upstream areas to spawn as adults. Of these species, only Central California Coast steelhead use tributaries flowing into south San Francisco Bay for spawning and rearing. Migration of these species occurs primarily in winter and spring months. During the month of January, adult Central California Coast steelhead are likely to be the only listed salmonid present near the proposed work site. Adult Central California Coast steelhead are generally pelagic-oriented, using the water column to migrate from the ocean to their natal streams. The Navy has proposed to install a silt curtain during a low tide, which will minimize the potential to trap steelhead inside the work site. The curtain will also serve as a barrier to prevent fish from entering the site during work activities.

Sediment removal activities at this site are expected to result in an increase of local turbidity through the suspension of material into the water column. This suspended material will contain both natural and anthropogenic contaminants that are likely associated with the sediment. The use of a silt curtain should act as a barrier during construction to prevent the contaminated-laden and turbid water from being released into the surrounding aquatic environment. The impact to designated critical habitat will be in the form of a local and temporary increase in turbidity, which NMFS considers to be minor at this location. As a result of this project, the removal of contaminated material from the sediments of San Francisco Bay at HPS is expected to improve salmonid habitat in the future.

Based on the best available scientific information, NMFS concurs with the Navy's determination that listed anadromous salmonids and critical habitat are not likely to be adversely affected by this project. This concludes consultation in accordance with 50 CFR §402.13(a) for the proposed removal of 300 cubic yards of metal-contaminated material from an intertidal area along the shore of San Francisco Bay at Hunters Point Shipyard, San Francisco, California. However, further consultation may be required if: (1) new information becomes available indicating that listed species or critical habitat may be adversely affected by the project in a manner not previously considered, (2) current project plans change that affects listed species or critical habitat in a manner not previously considered, or (3) a new species is listed or critical habitat designated that may be affected by the action.

If you have any questions about these comments, please contact David Woodbury at (707) 575-6088.

Sincerely,

for Rodney R. McInnis
Regional Administrator

cc: Russ Strach, NMFS, Sacramento, California
Ryan Olah, USFWS, Sacramento, California
Bob Batha, BCDC, San Francisco, California
Tom Napoli, CDFG, Los Alamitos, California

San Francisco Police Department: Crime Lab, Building 606 Utility Work

Brook Mebrahtu

Project Background

- Due to Navy's sewer removal project at Hunters Point Shipyard; a sanitary sewer bypass system will be installed for the Crime Lab's building 606.
- SFPD Crime lab is a city-wide forensic services division.
- CLIENTS: SF Police, Park Police, Medical examiner, DA, Public Defender, UCSF and others

Goals and Objective

- Disconnect from the Navy's site infrastructure
- Preserve and maintain the function of the Crime Lab
- Meet Navy's deadline of August 2006

4/25/2006 3

Project Team

• BKF Engineers	Civil/Utility Specialist
• New World Technologies	Env. Consultants
• Yerba Beuna Engineering	Contractor
• Subtronic	Utility locators

Advantages: same team players

4/25/2006 4

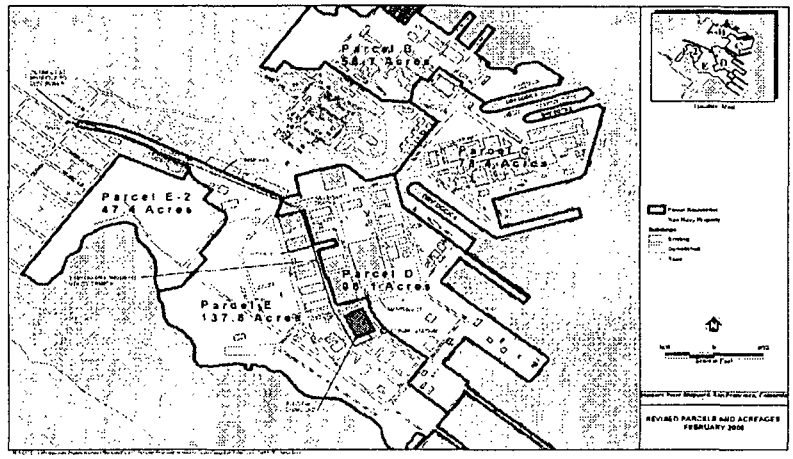
How Did We Get Here?

- Met with Navy Engineers and facility coordinator on 3/15 & 3/31
- Procured the services of consultants/contractors
- Validated initial design criteria with Navy
- Site evaluation on-going.

Available Options

- Two proposed options:
  1. Force Main to connect to City's gravity system
  2. Contacted truck Service bypass
- Established a preliminary budget of $425,000

Proposed layout



4/25/2006 7

Proposed Layout

- Minor excavated areas
- No anticipated discharge of liquids
- Utilize dust mitigation controls during excavation and backfill
- Utilize the utility trench as much as possible
- Utilize above ground tank storage, catchments and pump stations

4/25/2006 8

Next steps

Complete engineering drawings

- Complete draft environmental work plan by NWT for review and approval by RASO.
- Develop Health and Safety plan for;
  - Control of radiological hazards
  - RAD screening
  - Compilation and proper disposal of radioactive materials
- Permitting: Will request Navy to issue license upon approved work plan

4/25/2006 9

Milestone Schedule

• NTP to BKF Engineers	April 12, 2006
• Complete Construction Documents	May 15, 2006
• Draft Environmental Work Plan submission to Navy and BCT	June, 1, 2006
• Incorporate Navy and BCT comments in work plan for Final approval	June 22-30, 2006
• Construction	July 1- Aug 1, 2006

4/25/2006 10

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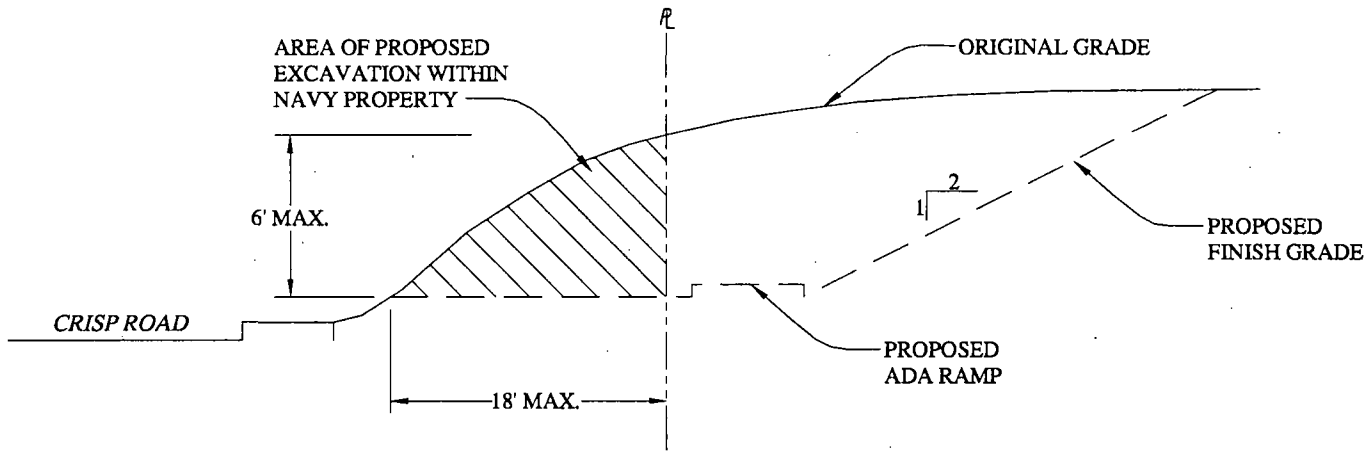
A'



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NO SCALE

ENGEO INCORPORATED
EXCELLENT SERVICE SINCE 1971

SECTION A-A' - CRISP ROAD GATE AREA
PARCEL A' - HUNTERS POINT
SAN FRANCISCO, CALIFORNIA

PROJECT NO.: 5638.6.100.01		FIGURE NO. X-3
DATE: APRIL 2006		
DRAWN BY: DLB	CHECKED BY: BHBJ	

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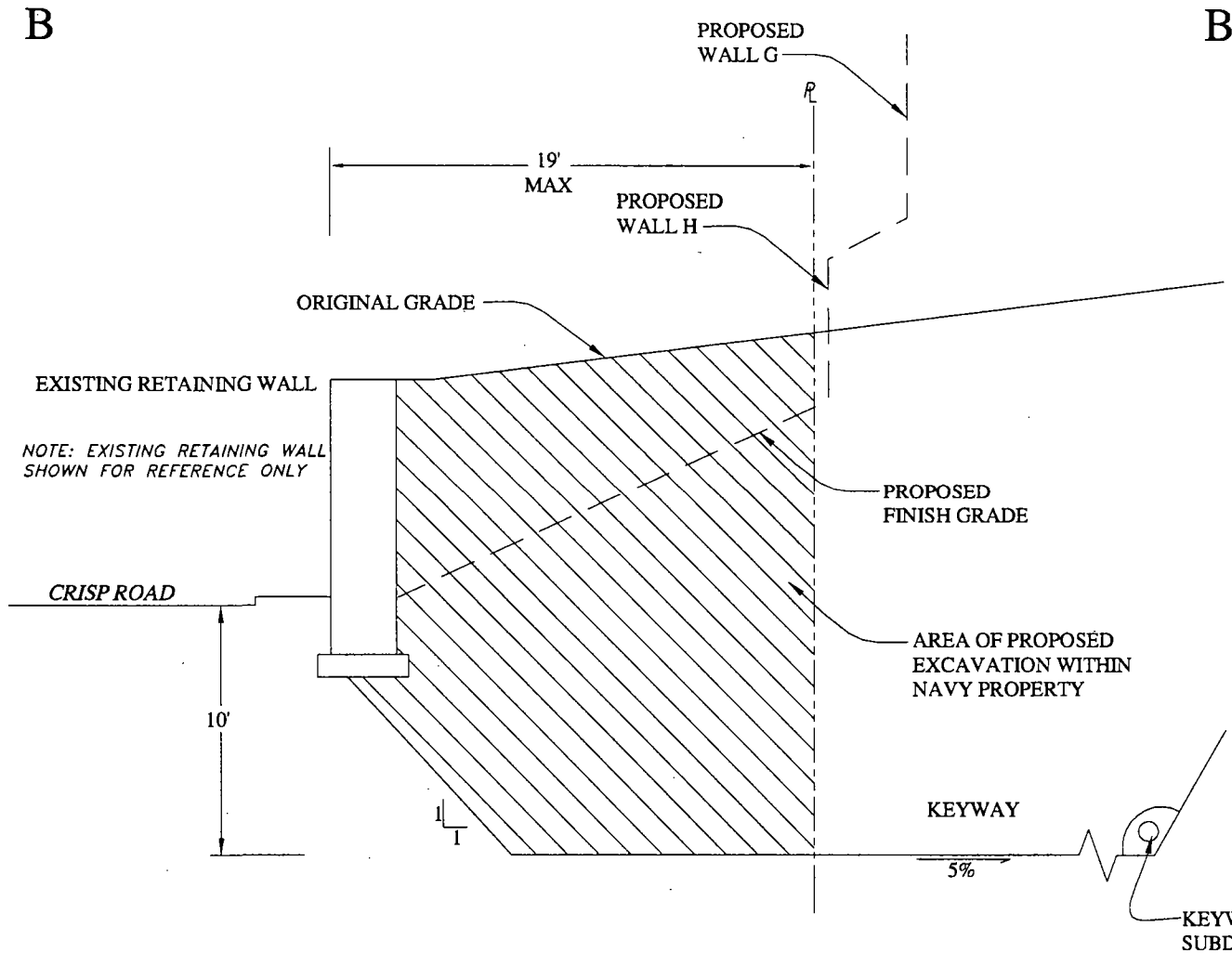

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ENGEO INCORPORATED
EXCELLENT SERVICE SINCE 1971

SECTION B-B' - EXISTING RETAINING WALL
PARCEL A' - HUNTERS POINT
SAN FRANCISCO, CALIFORNIA

PROJECT NO.: 5638.6.100.01		FIGURE NO. X-4
DATE: APRIL 2006		
DRAWN BY: DLB	CHECKED BY: BHBJ	

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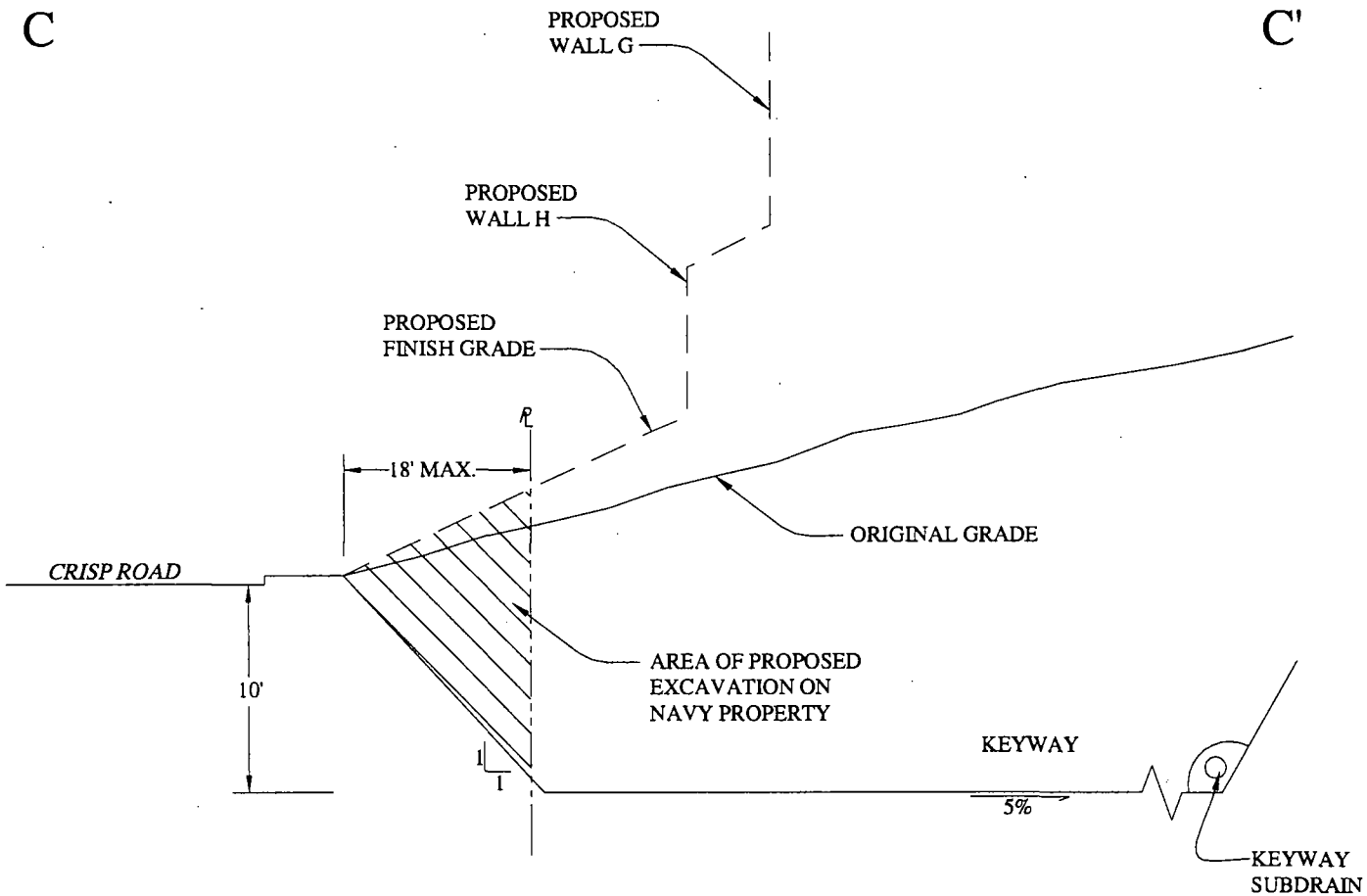

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NO SCALE

ENGEO INCORPORATED EXCELLENT SERVICE SINCE 1971	SECTION C-C' - WEST OF EXISTING WATER VAULT AREA PARCEL A' - HUNTERS POINT SAN FRANCISCO, CALIFORNIA	PROJECT NO.: 5638.6.100.01 DATE: APRIL 2006 DRAWN BY: DLB CHECKED BY: BHBJ	FIGURE NO. X-5

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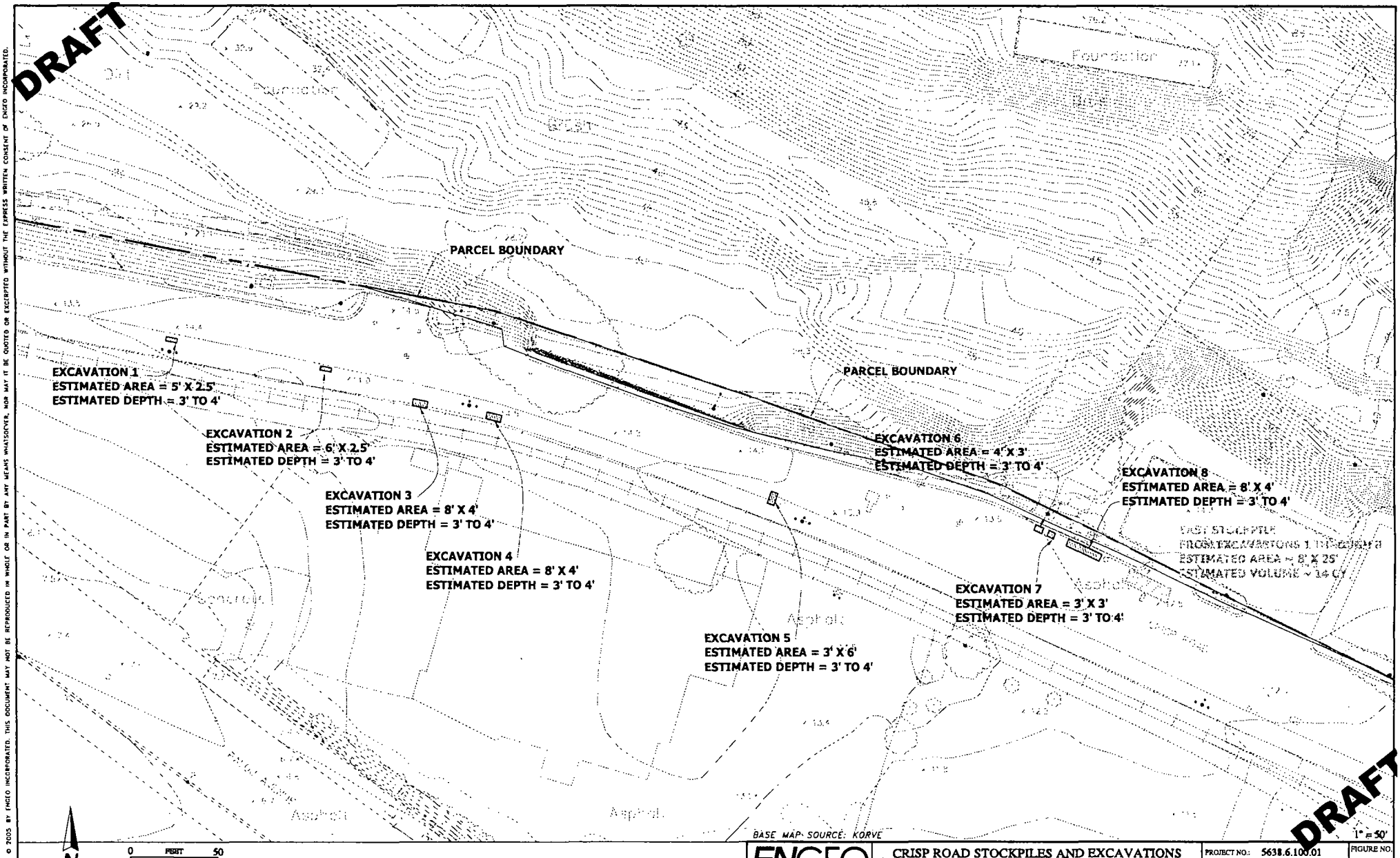

N

0 FEET 50
0 METERS 25

BASE MAP: SOURCE: KORVE

1" = 50'

ENGEO INCORPORATED
EXCELLENT SERVICE SINCE 1971

CRISP ROAD STOCKPILES AND EXCAVATIONS

PARCEL A' - HUNTERS POINT

SAN FRANCISCO, CALIFORNIA

PROJECT NO: 5638.6.100.01	FIGURE NO.
DATE: APRIL 2006	S-1
DRAWN BY: BHBJ CHECKED BY: EBF	

ORIGINAL FIGURE PRINTED IN COLOR

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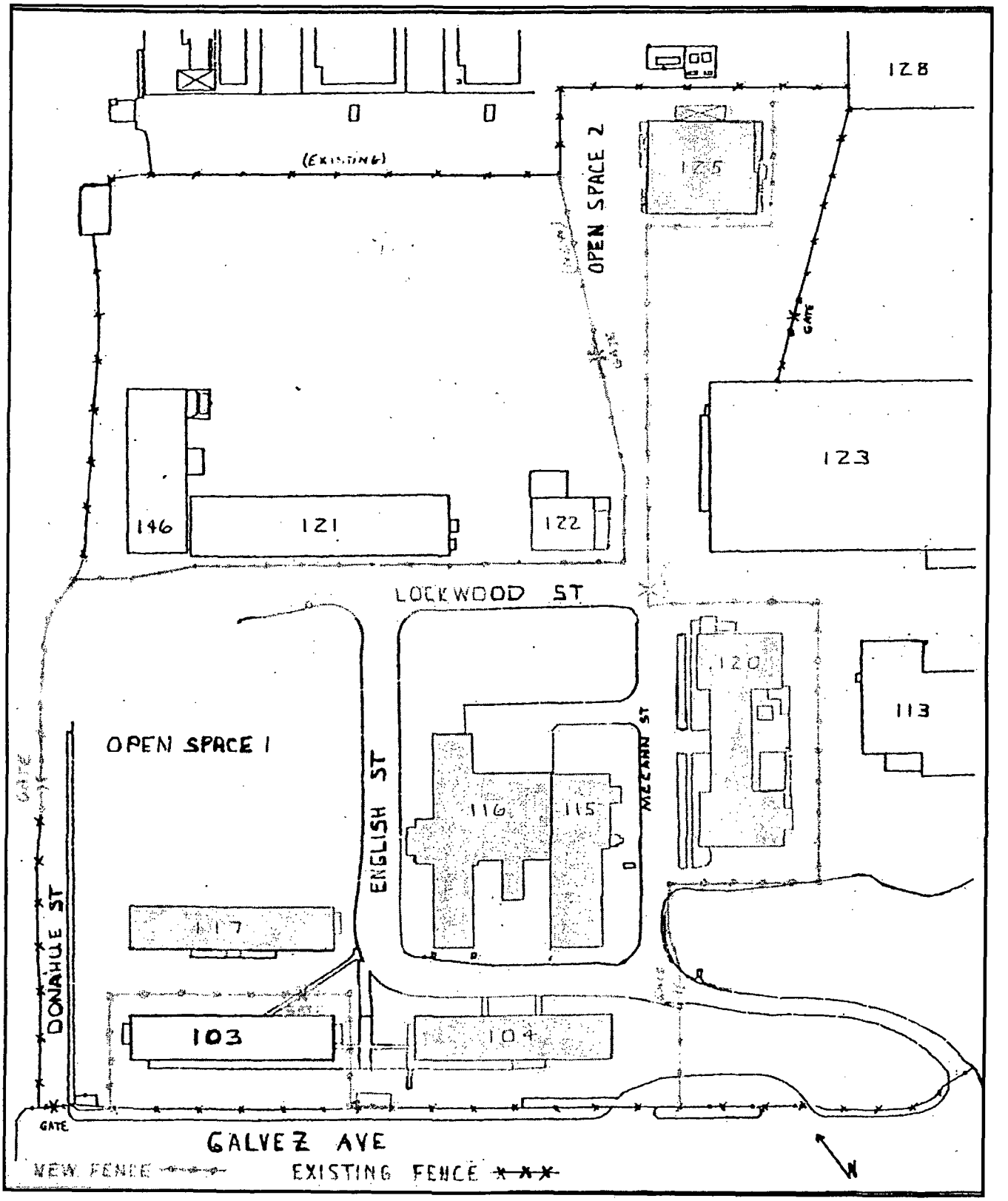
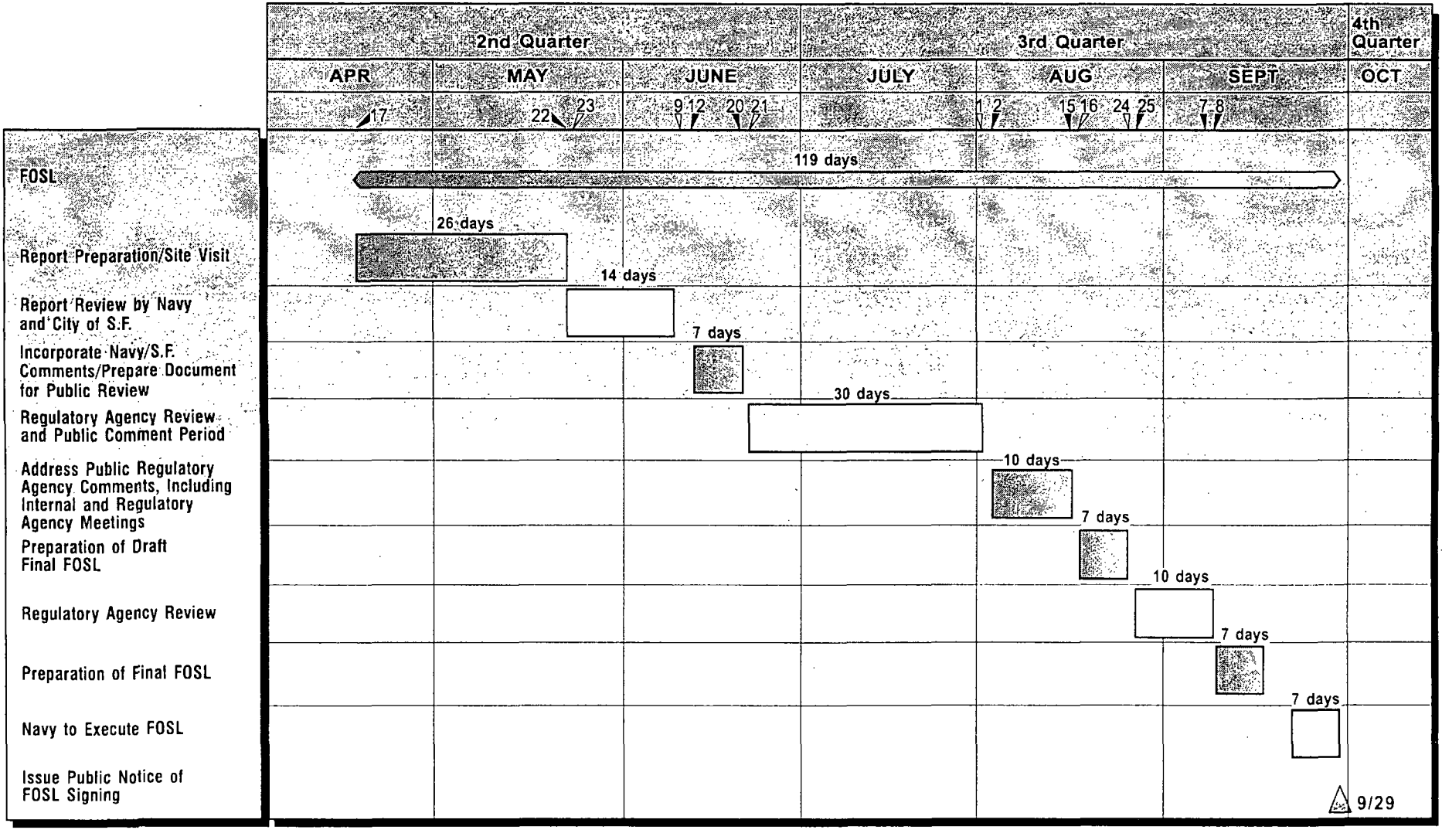


Parcel B FOSL Area

Finding of Suitability to Lease (FOSL) Report Preparation
Schedule for Buildings 104/115/116/117/120/125/Open Spaces/Access Road

Hunters Point Shipyard, San Francisco, California



Base-wide Radiological Program Update

Hunters Point Shipyard
BCT Meeting
April 25, 2006

Update Overview

- Radiological Survey Work
- Action Memorandum RTCs
- Base-wide Sewer Plan RTCs
- Parcel B Design Plan (sewers) RTCs
- Sewer Removal Schedule Update

Radiological Survey Work

- **Survey Work**
  - **–Building 813**
    - Class 1 Survey Planned
    - 1st floor only (4-story Building)
    - Task Specific Plan (TSP) Completed
    - Field Work on-going (~4 field weeks)
  - **-Building 103**
    - Previous phase V survey (Class III)
    - New HRA information (Shower/decon for CROSSROADS)
    - Class 1 survey planned (TSP)

Radiological Survey Work – Cont.

- **Survey Work**
  - **–Phase V Survey Review**
    - Past survey limits
    - New HRA information
    - Case by case
  - **– Survey Reports**
    - Building 819, 146 and 253 characterization report
  - **– Keel Block Survey**
    - Identify, survey, consolidate blocks (2,000+)

Radiological Survey Work – Cont.

- **Radiological Feasibility Study Addendums**
  - **–Parcels**
    - Drafts in preparation for Parcel B, E-2, and D
    - Parcel C, E, and F to follow
  - **–Function**
    - Integrate radiological work into CERCLA process (PP, ROD)

Action Memorandum RTCs

- **DTSC**
  - **–TCRA Basis 40CFR300.415(b)(4)**
  - **–No default deferral to USEPA clean-up standards**
  - **–Clarification on interim action nature**
- **CaDHS**
  - **–Release Criteria does not guarantee free release**
    - Dose based, <25 mrem/yr
    - ALARA
    - Case by case evaluation

Action Memorandum RTCs – Cont.

- **USEPA**
  - **Inclusion of daughter products (Cesium & Uranium)**
  - **Cost Estimate clarification**
  - **Release criteria (Cesium-137 to 0.113 pCi/g)**

Base-wide Sewer Plan RTCs

- **DTSC/CaDHS**
  - **Approach clarifications**
    - Survey Design (1000 m^2, 6-inch thick soil layer for scan/sample; sidewalls/bottom scan/sampling) – MARSSIM Style
    - Survey Instrument information/approach
    - Cleared soil reuse (Industrial/Residential)
    - Survey Rational (Point source/area)
    - Table revisions (ensure release limits model below 25 mrem/yr)

Base-wide Sewer Plan RTCs - Cont.

- **USEPA**
  - **Table A.8-1**
    - Titles, Import Material vs. Backfill Screening Levels
      - –Screen to EPA PRGs (residential or Industrial)
      - –For Spills/releases
      - –Naturally occurring metals will not be disposed of as waste
  - **IR Site Sampling Issue**
    - IR sites have conservative but not full-proof basis
    - Sample up to 500 c.y adjacent IR site materials
    - Also rely on visual and field instruments (PID/FID)

Base-wide Sewer Plan RTCs - Cont.

- **USEPA**
  - **Bay dewatering Issue**
    - In areas of GW plume discharge, contain water and sample/discharge to POTW
  - ***MW Destruction Issue***
    - Initial Identification (will tune in field)
    - Method of decommissioning
    - Replacement (RAMP wells, key sampling wells, etc.)
    - *Monitor RAMP wells before decomissioning*

Parcel B Design Plan (sewers) RTCs

- **USEPA**
  - **LNAPL/DNAPL ID and address**
  - **Table 3-1 (ID all COCS for each IR site)**
  - **Soil Handling from GW risk plumes (waste segregation/management)**

Sewer Removal Schedule Update

- **Sewer Excavation approach**
  - **Use of IR-07/IR-18 area as main radiological soil screening area**
  - **Divide work into 12 sections**
    - Convenient to discussions/work planning
    - Allows scheduling of sensitive areas (buildings with tenants)
    - Work each sub area starting up-gradient to downhill (storm water flow direction)

Sewer Removal Schedule Update – Cont.

- RTCs issued April 18 (via email)
- Final Documents April 19 (email), hardcopy April 22
- Initial excavation delayed from week of April 16 until week of May 16
  - Allows additional time for RTC review
  - Allows for addition mobilization activities (full lay-down area completion, on-site laboratory start-up, etc.)

NIRIS Naval Installation Restoration Information Solution

Who, What, Where, When, and Why

This Fact Sheet describes the on going development of Naval Installation Restoration Information Solution (NIRIS)which uses web and desktop based Geographic Information Systems (GIS) and related tools to help Remedial Project Managers (RPMs) effectively analyze the spatial distribution and correlate large volumes of data. NIRIS tools can help RPMs make smart cleanup decisions, and collaborate with stakeholders. This is one in a series of informational flyers that will be issued periodically throughout the development.

Overview

Restoration projects typically have thousands of spatial data records, for example, there are many sampling locations including groundwater monitoring well, and soil sample locations, and each sample collected often has over a hundred lab analytes reported. Currently, Installation Restoration (IR) data is in various different formats, and is located in many separate locations. The NAVFAC IR Geographic Information System (GIS)/Data Management Workgroup was established by the IR Managers to develop a corporate methodology using common business practices for managing and facilitating the use of IR data through web-based GIS applications in a consistent and cost effective manner. The system being developed is called **Naval Installation Restoration Information Solution** (**NIRIS**). Remedial Project Managers (RPMs) and our contractors can request a logon and password to access the site. The web address is https://www.niris-nedd.org.

Background

NIRIS will be used by all NAVFAC Facility Engineering Centers to ensure that Navy and Marine Corps Installation Restoration Program data is maintained and accessible over the lifecycle of the IR program and beyond. NIRIS uses web and desktop based Geographic Information Systems (GIS) and related tools to help Navy RPMs and our contractors, effectively analyze the spatial distribution and correlate large volumes of data. NIRIS tools will help RPMs make smart cleanup decisions, and collaborate with regulators, the public, and other stakeholders.

NIRIS is compliant with the Federal CADD/GIS Centers Spatial Data Standards (SDS) for Facilities Infrastructure and Environment https://tsc.wes.army.mil/products/TSSDS-TSFMS/tssds/html/. This facilitates data sharing between other SDS compliant databases, such as the Regional Shore Infrastructure Plan (RSIP).

The **Naval Electronic Data Deliverable (NEDD)** includes standard formatted tables for all IR data typically collected. NEDD facilitates loading data into NIRIS using the web-based Data Checker and Data Loader. There are about 50 tables in NEDD; however a typical IR project only uses about 10 tables.

Data managed by NIRIS includes:

- Environmental location, sample, and results data
- Munitions/UXO data
- Administrative Record/Site File Documents
- Land use control information
- GIS facility maps and IR site boundaries

Data is loaded into NIRIS in two ways:

- Historic data will be loaded on a case-by-case basis (e.g., is it an active site or is it already closed; is it data from a remedial investigation, or is it 20 year old data from a Site Investigation)

- After NIRIS is deployed, data that is collected will be loaded into the database using NEDD and the NIRIS web based Data Checker and Data Loader according to the instructions in the Standard Operating Procedures.

Schedule

Currently, the NIRIS database structure and NEDD have been designed, tested, and locked as version 1.1 in September 03. A user needs assessment has been performed to help determine what end user data analysis tools to develop.

In 2004, various historic data are being loaded; system administration tools for automated data loading, reporting, and checking will be completed; training and Standard Operating Procedures describing how to use NIRIS will be provided prior to initial deployment.

Initial deployment is scheduled to start in the Fall 2004 and will be managed at each NAVFAC Facilities Engineering Center separately. After the initial deployment date, all current IR data being collected will be required to be loaded into NIRIS using the NEDD format, Data Checker and Data Loader tools, according to the NIRIS Standard Operating Procedures. NAVFAC guidance will be issued along with language to put in contracts. Training will be provided to RPMs and contractors on how to load and manage data using NIRIS.

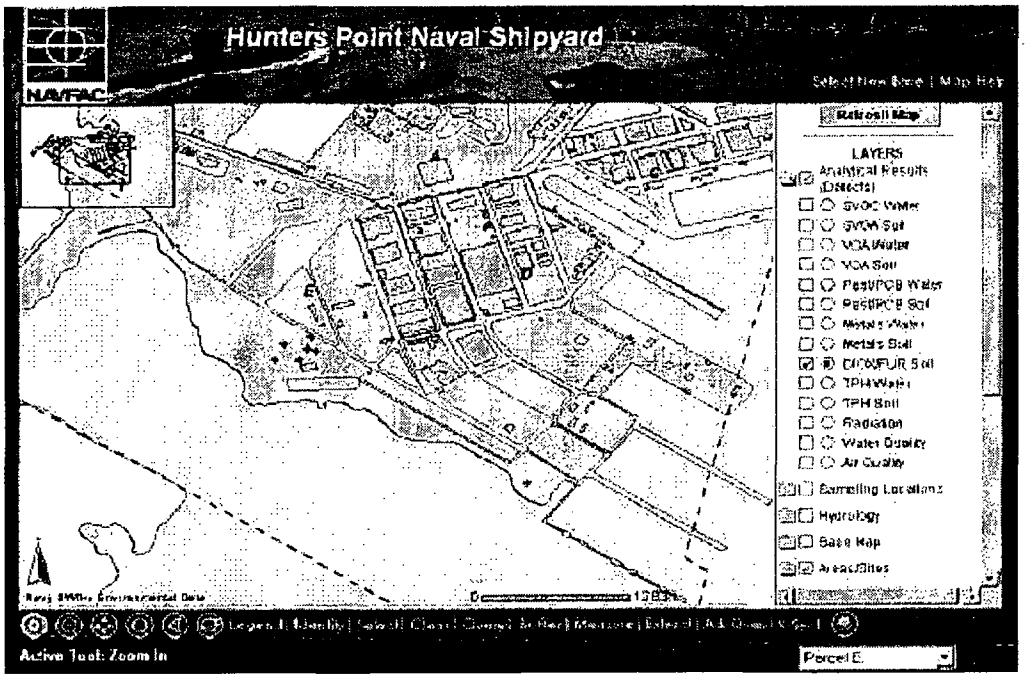
In 2005 historic data will continue to be loaded; user tools for data visualization, data analysis and data validation will be completed. Training in 2005 will focus on how to use NIRIS to analyze and visualize data. NIRIS will be fully deployed when the end user data analysis tools are completed.

Future Activities

Further instructions and updates will be provided in the Fall of 2004. Training for RPMs and contractors will be offered at the Fall Remediation Innovative Technology Seminar, and via electronic training modules.

The next NIRIS update will be issued in late summer 2004 and will focus on initial deployment in more detail, and will include a more detailed discussion of the following topics:

- Data Checker
- Data Loader
- Standard Operating Procedure for using NEDD-NIRIS
- Training



Demonstration map generated using a web enabled interface querying data in the NIRIS database format

FOR MORE INFORMATION

If you have any questions, check the NIRIS Web site at https://www.niris-nedd.org

NEDD Table Submittal By Environmental Project Type (Projected)

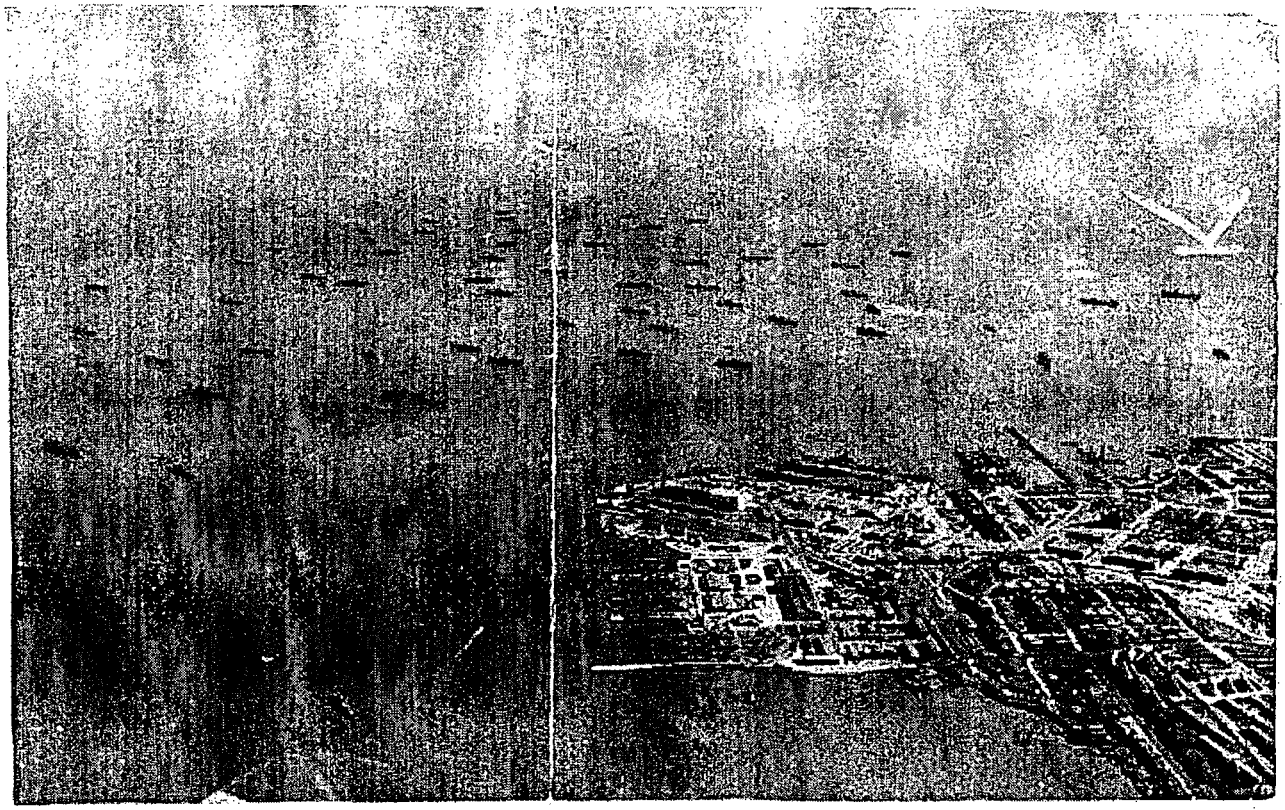
NEDD		Project Type									
Module	**Table**	**Groundwater Sampling**	**Soil Sampling**	**Soil Gas Sampling**	**Well Installation and Construction**	**Borehole Installation and Logging**	**Excavation**	**Biological Sampling**	**Munitions Survey**	**Aquifer Testing**	**Land Use Control**
People, Organizations	Agency (Master List)	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
	Contractor (Master List)	✔	✔	✔	✔	✔	✔	✔	✔	✔	
	Laboratory (Master List)	✔	✔	✔	✔	✔	✔	✔	✔		
	Owner (Master List)	✔	✔	✔	✔	✔	✔	✔	✔		✔
	Point of Contact (Master List)										
Project	Environmental Project (Master List)	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
	Program Contract (Master List)	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Location	Environmental Zone (Master List)										
	Excavation (Master List)						X				
	Location (Master List)	✔	✔	✔	X	X	X	✔	✔	✔	
	Location Site XREF										
Sample	Sample	X	X	X			X	X			
	Sample Site Zone XREF										
	Sample Tracking	X	X	X			X	X			
Environmental Measurement	Environmental Measurement			✔							
	Measurement Site Zone XREF										
Chemistry Result	Analytical Result	X	X	✔			X				
	Local Regulation										
	QC Results										
	Screening Criteria										
	Screening Value										
	Validation Update										
Biological	Biological Specimen (Master List)							X			
	Biological Survey							✔ Ⓓ			
	Toxicity Testing							X Ⓓ			
	Transect							✔ Ⓓ			
Geology	Borehole		X		X Ⓓ	X					
	Geologic Unit (Master List)										
	Lithologic Description		X		X Ⓓ	X					
Hydrogeology Well	Groundwater Level	X									
	Pumping Interval										
	Water Well History										
	Well (Master List)	✔			X					✔	
	Well Construction	✔			X						
	Well Pump				X Ⓓ						
Aquifer Testing	Aquifer (Master List)										
	Aquifer Test (Master List)									X	
	Hydro Calculation										
	Pump Rate									X	
	Test Water Level										
	Tracer injection										
Munitions Survey	Geophysical Anomoly								X		
	Ordnance								X Ⓓ		
Land Use Control	Control Plan Role										X
	Land Restriction										X
	LUC Implementation										X

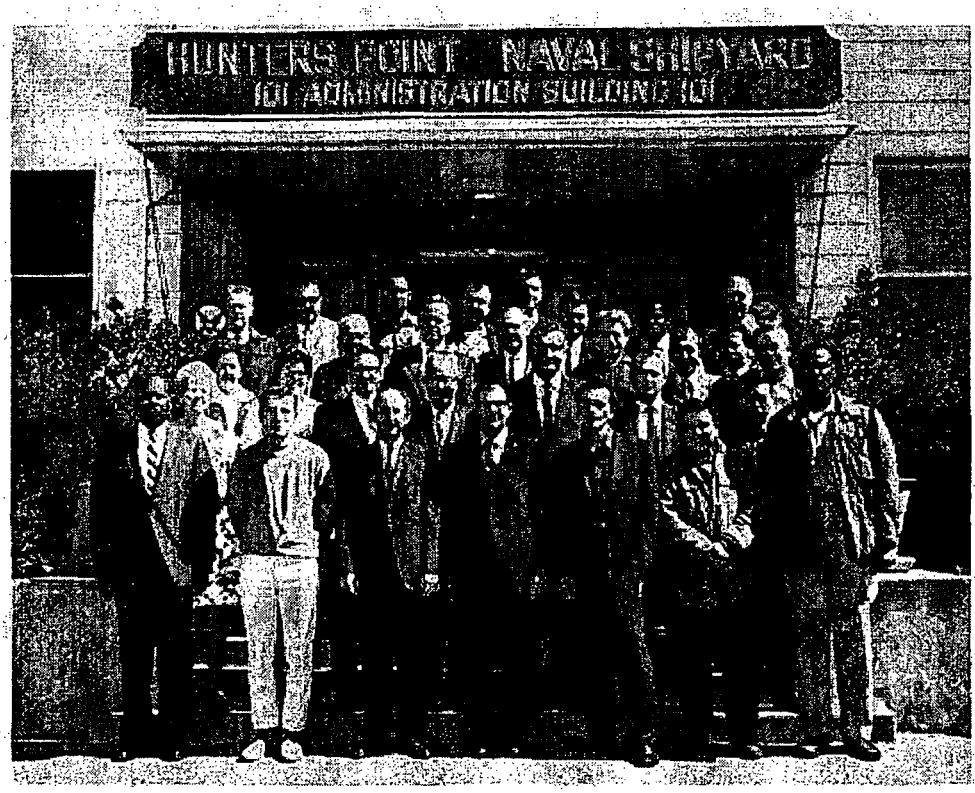
X = required table

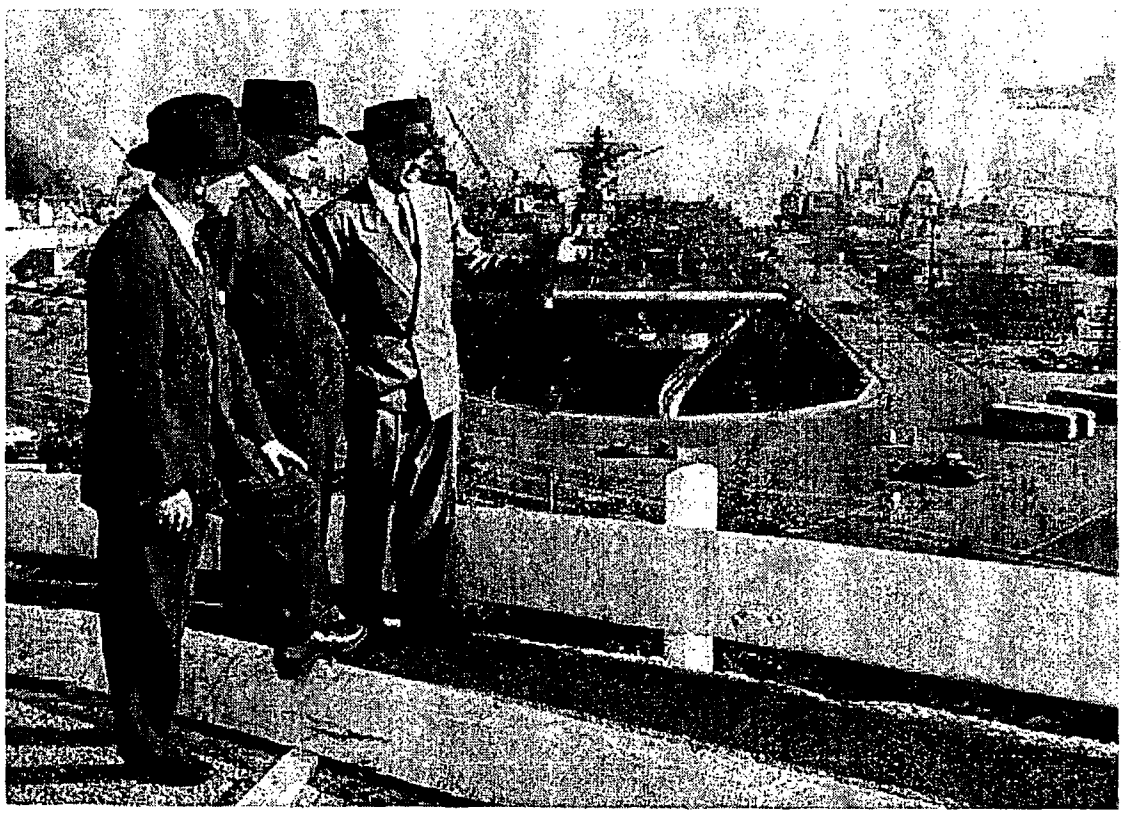
✔ = required if value is not in the Master List

Ⓓ = conditionally required depending on the type of sampling

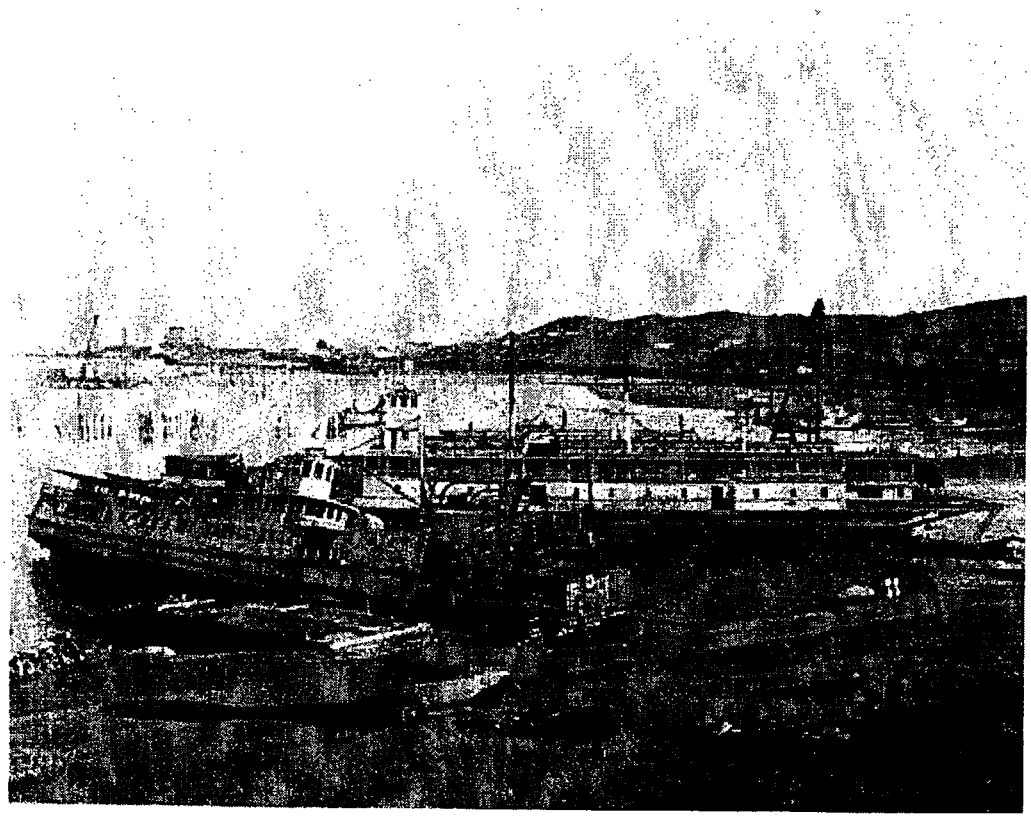
This list is for guidance purposes. However, divergence from this list must be justified by approval from your Naval RPM.

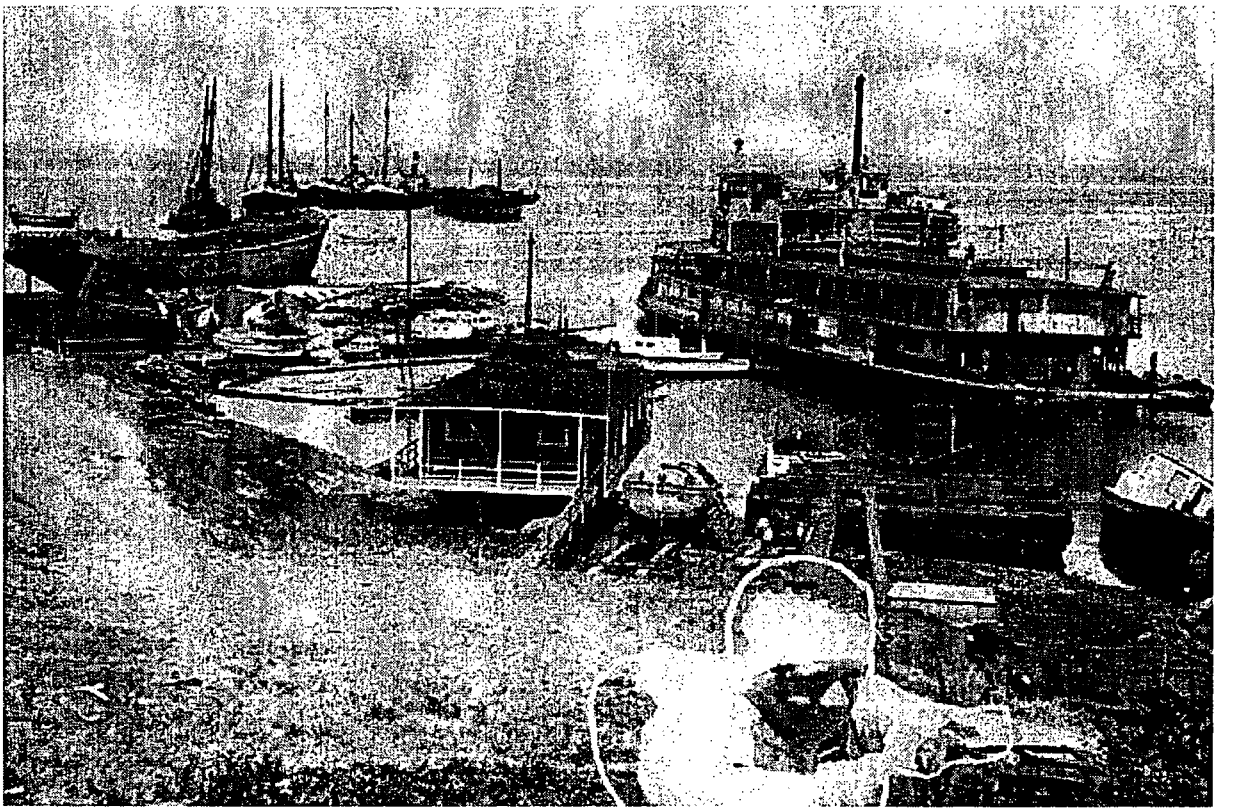


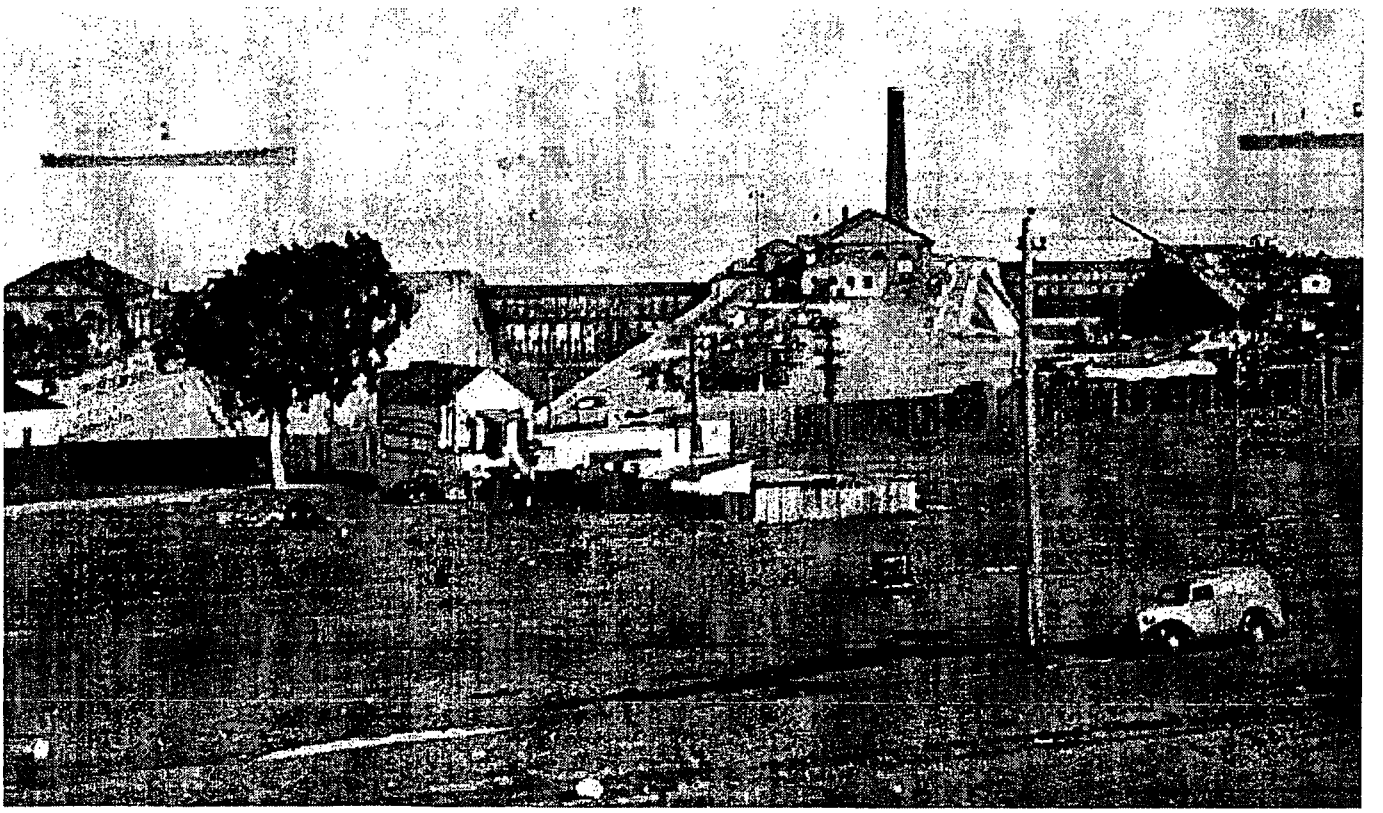

HUNTERS POINT NAVAL SHIPYARD
101 ADMINISTRATION BUILDING 101

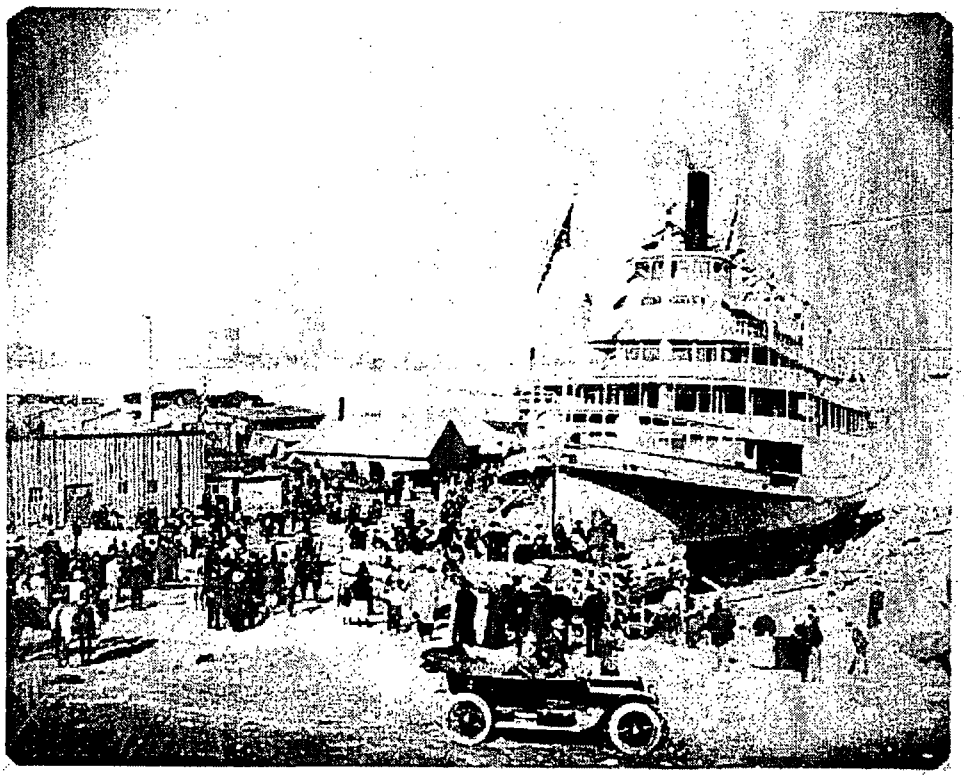


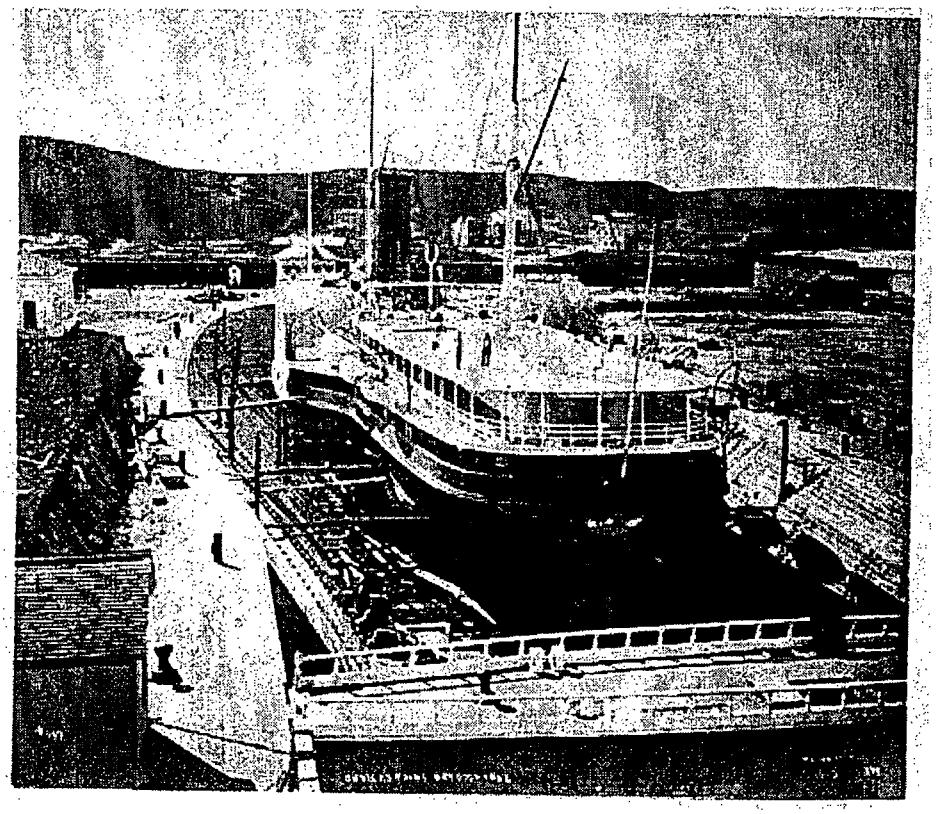
St. China in Old Hunters Point Drydock ~ 1901. H. Blair

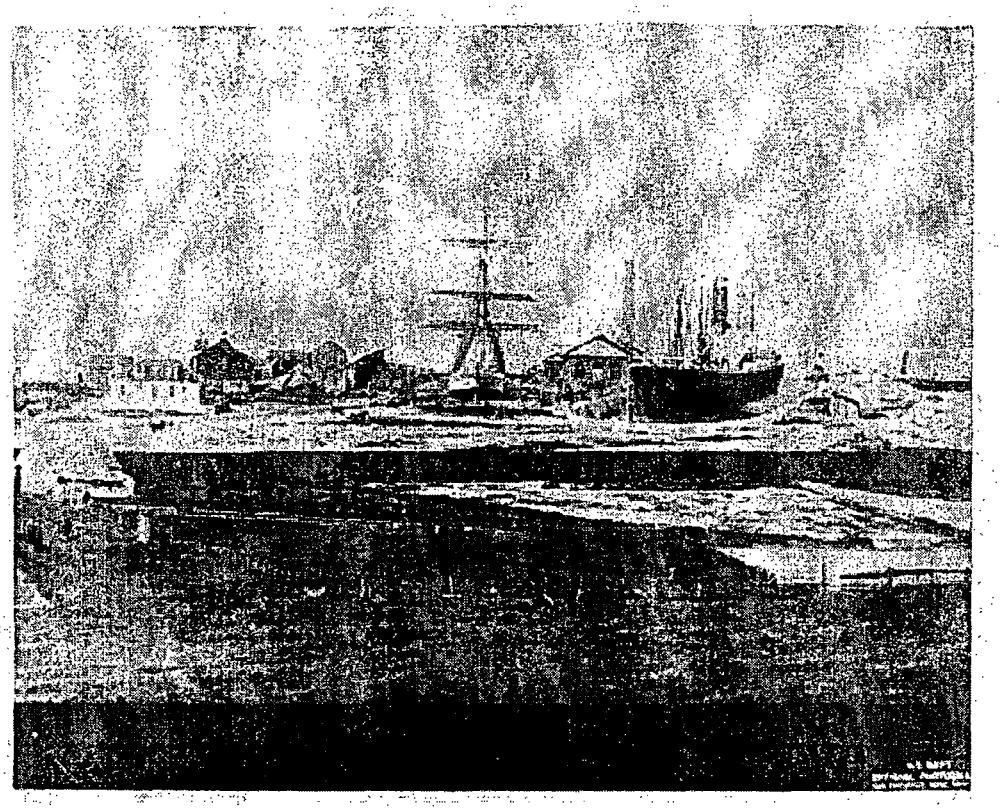


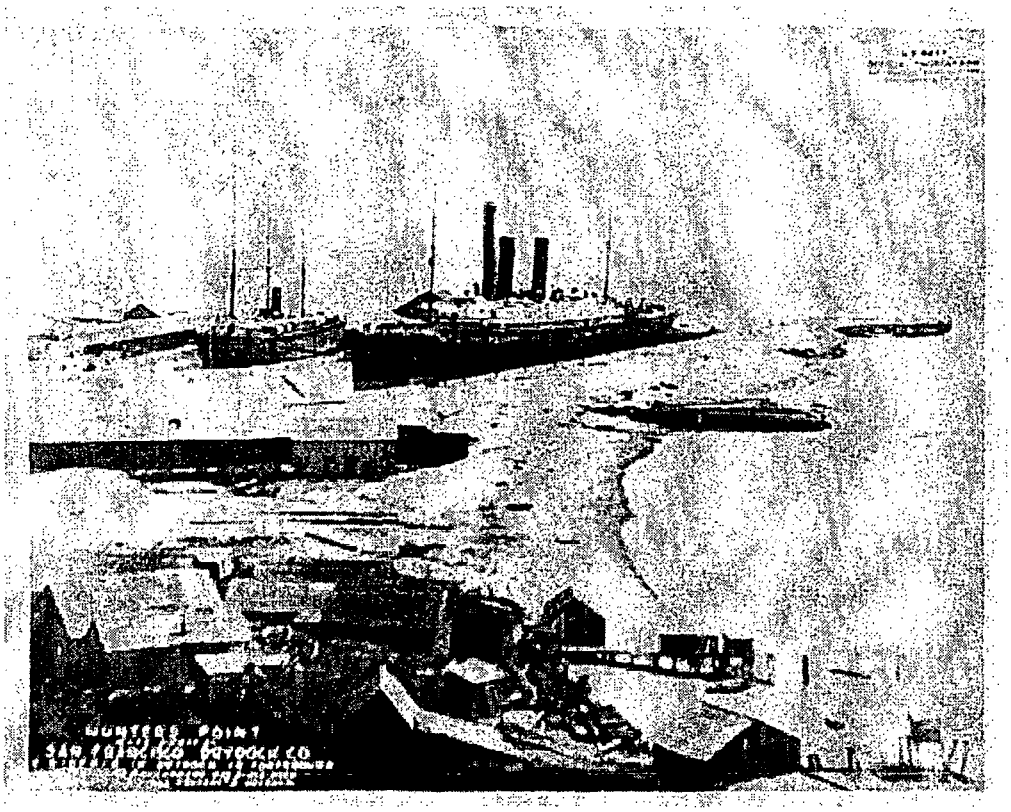


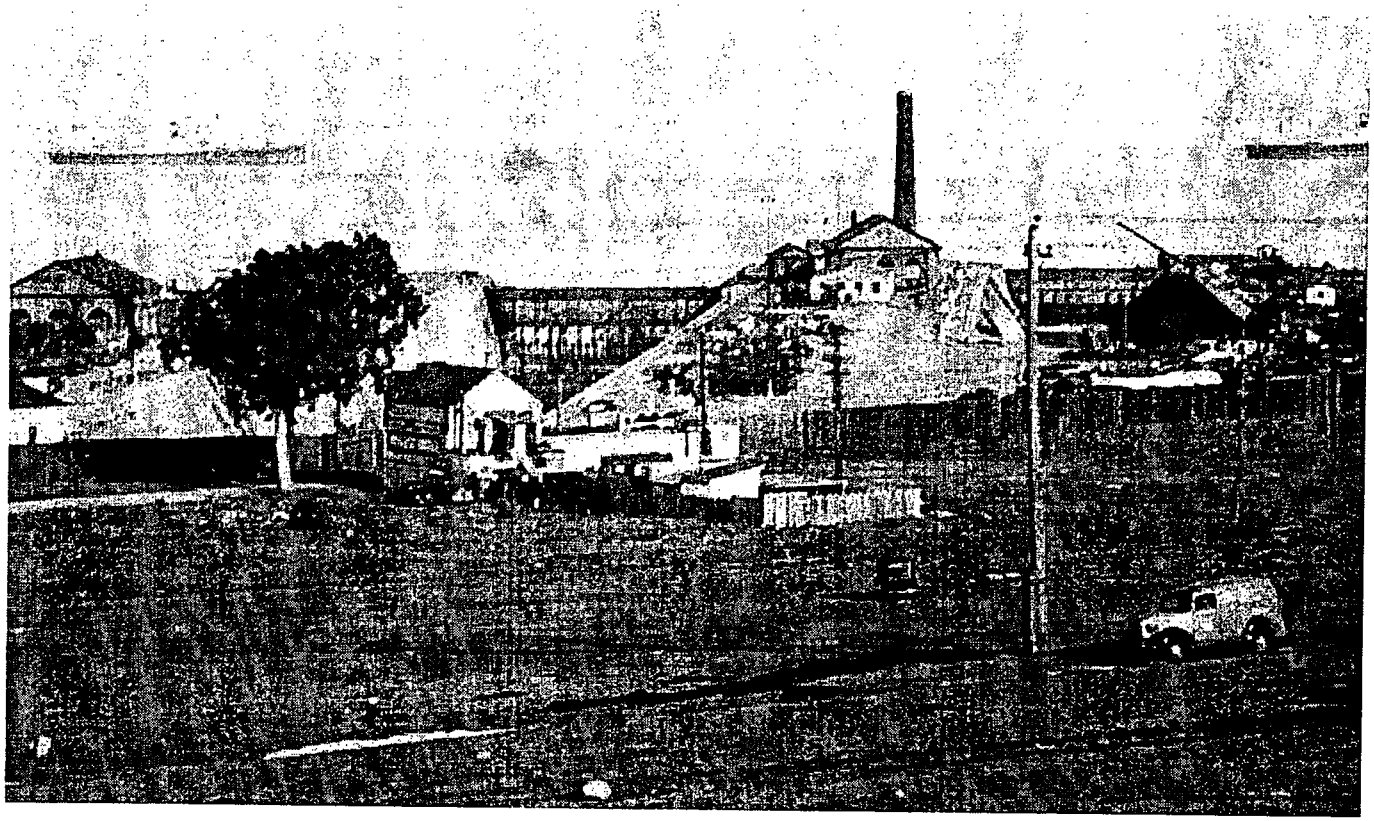


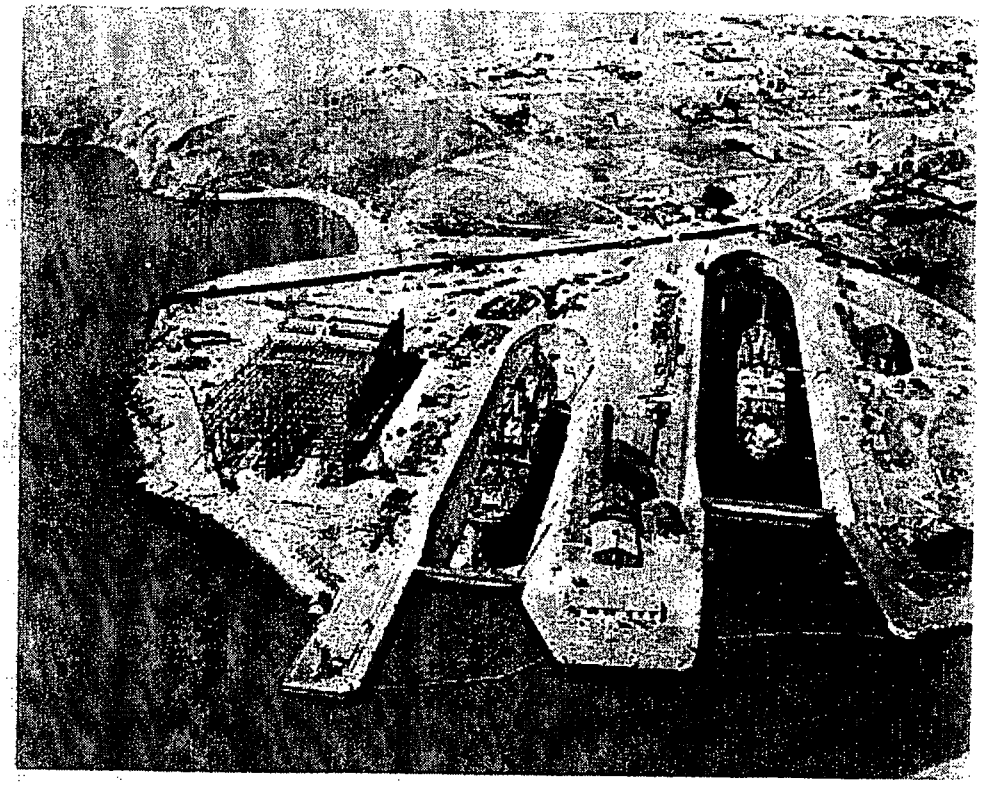


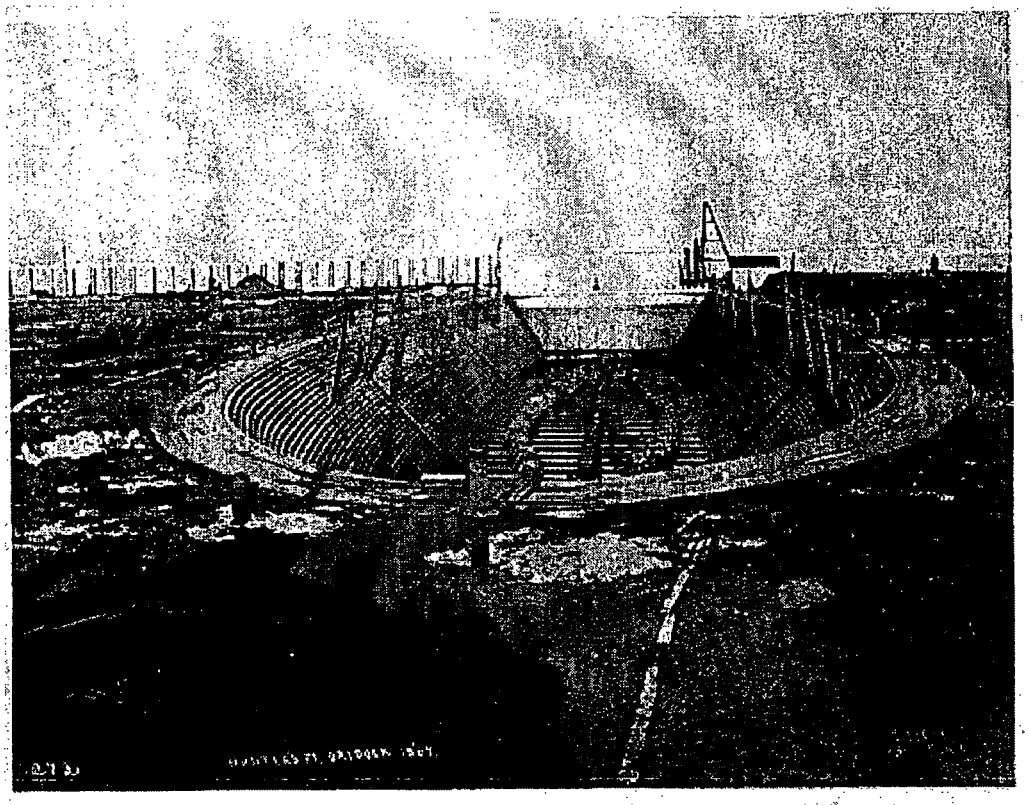


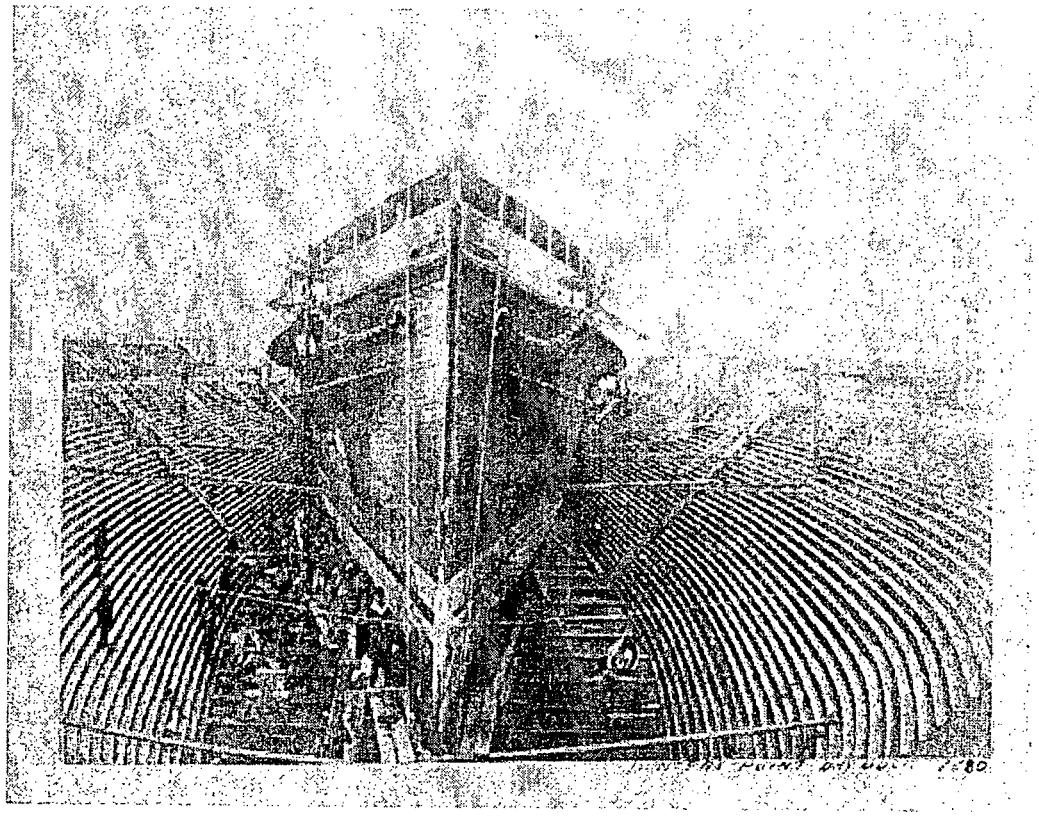


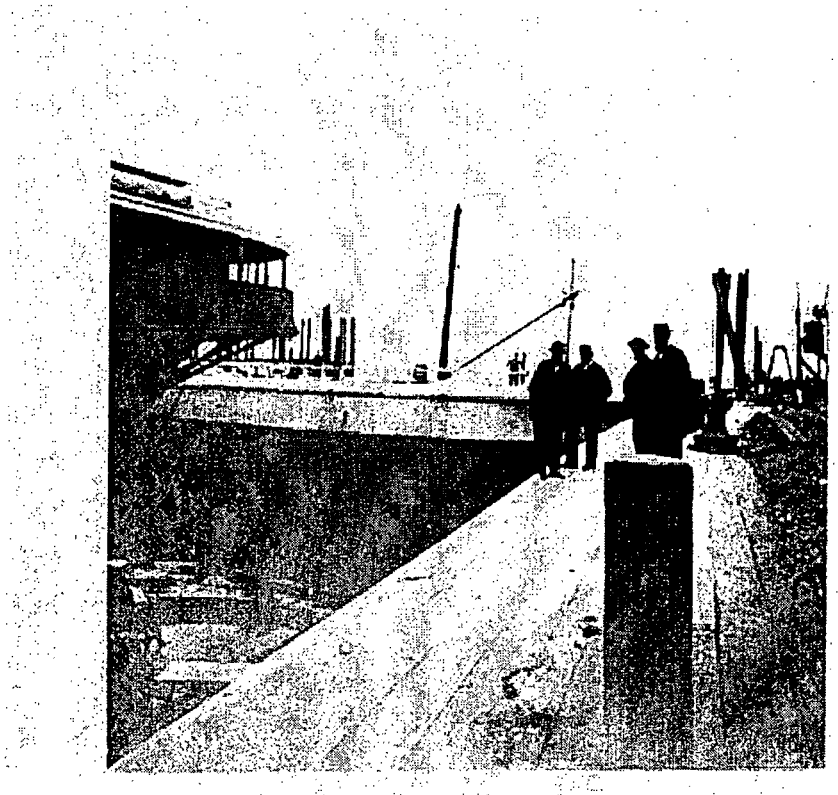


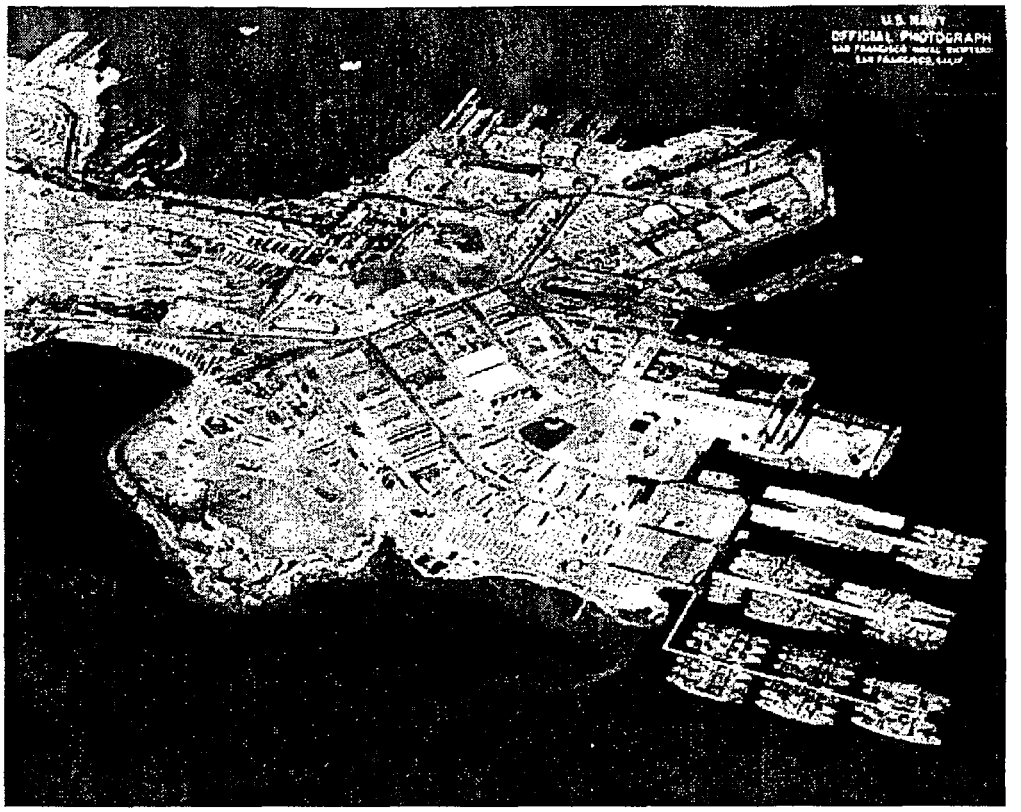








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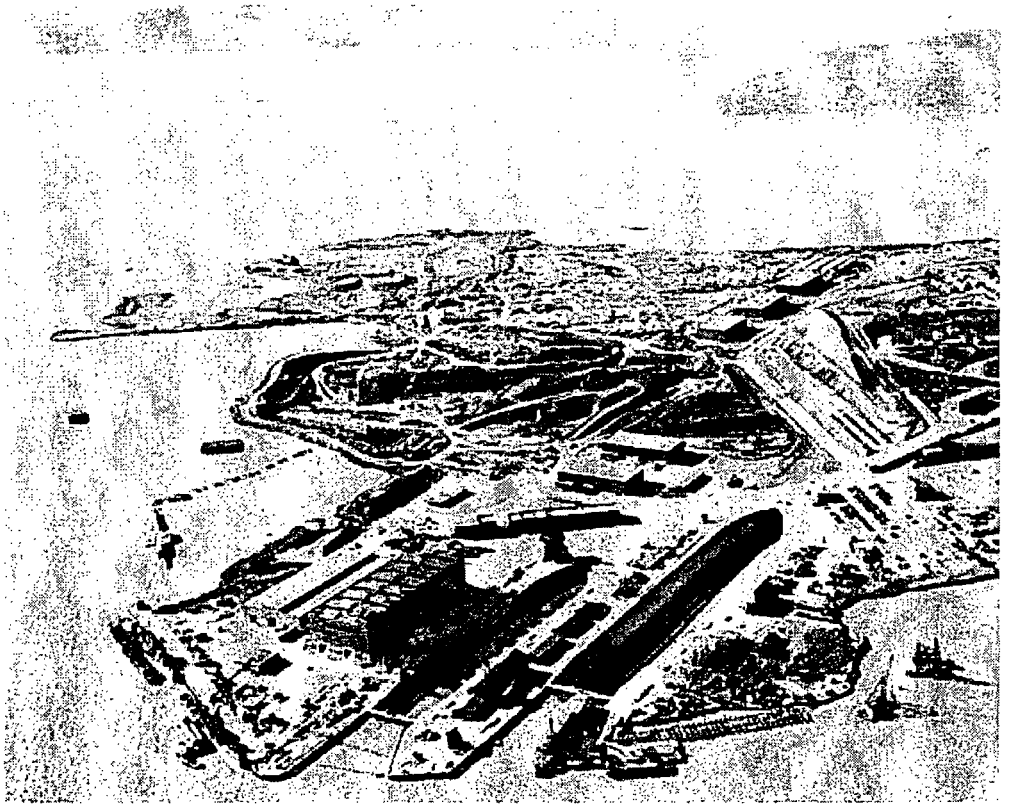

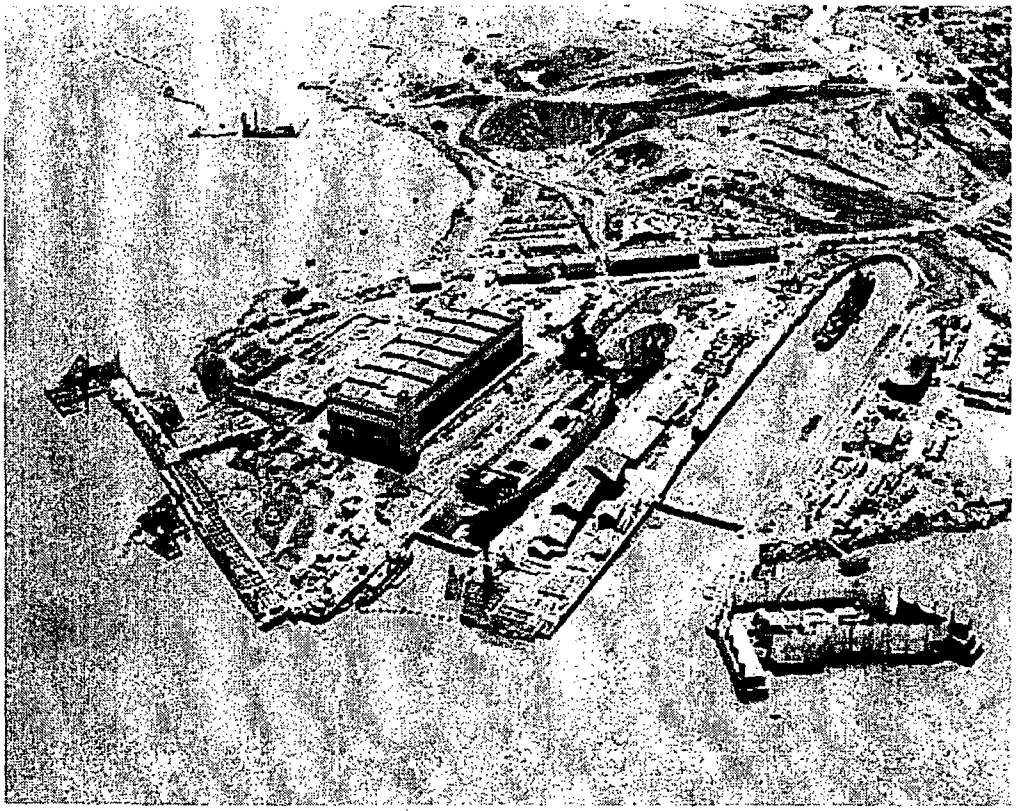

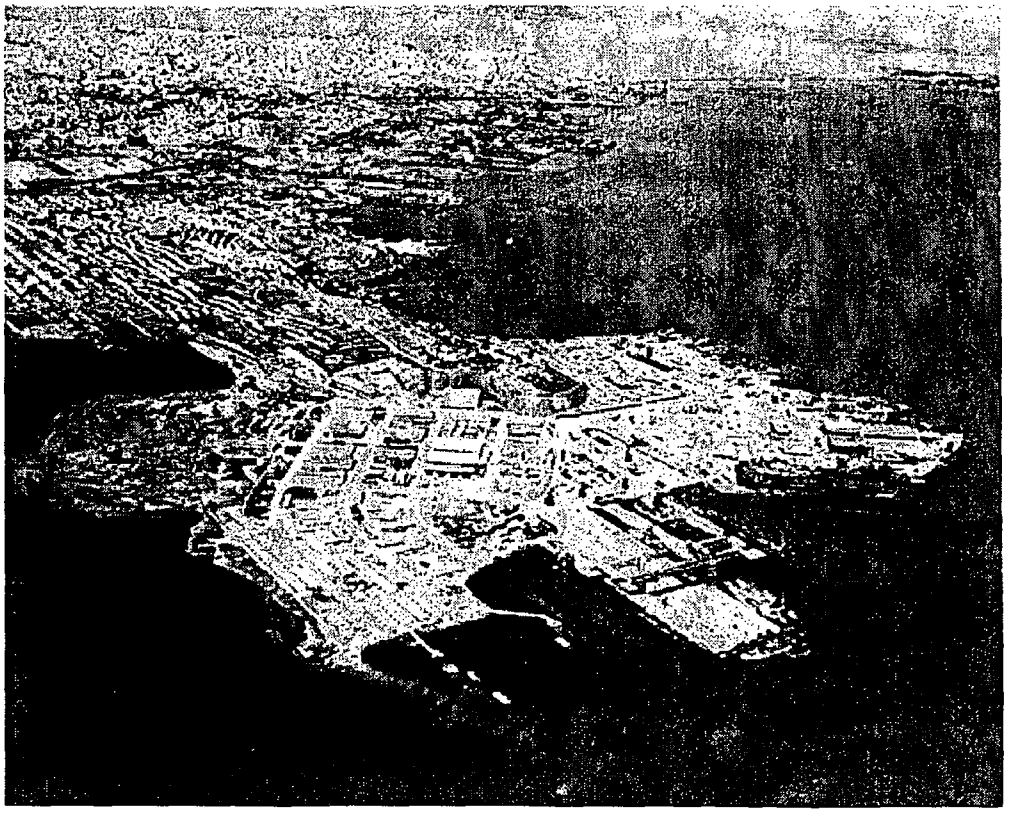

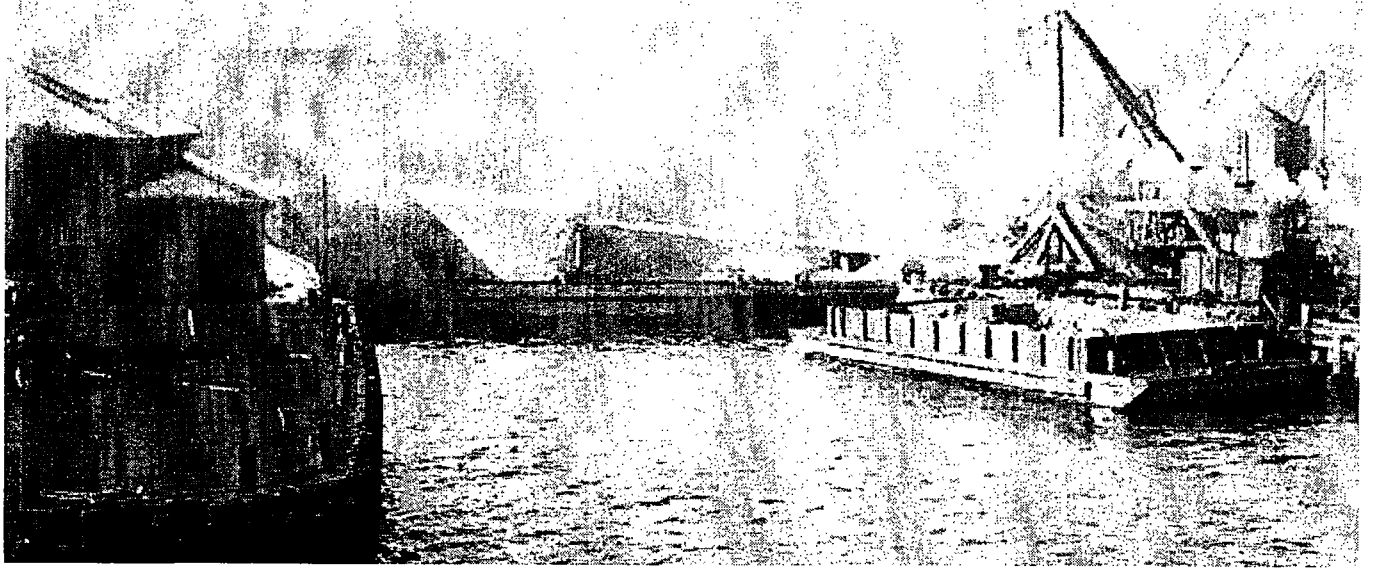

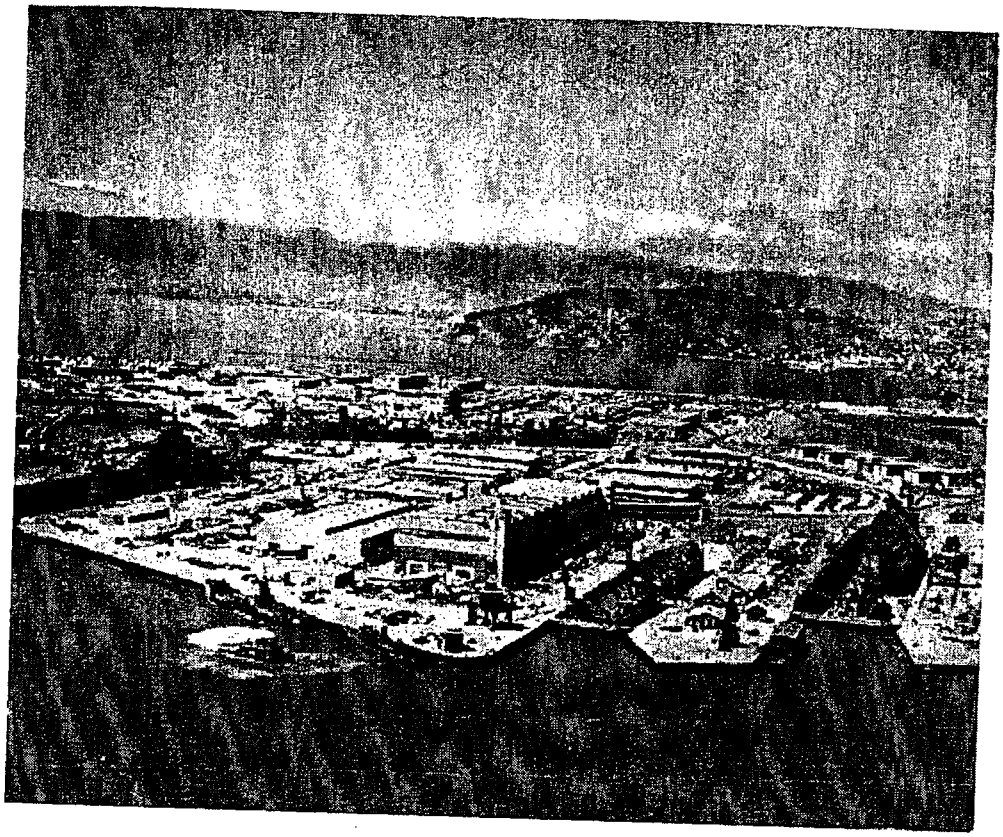

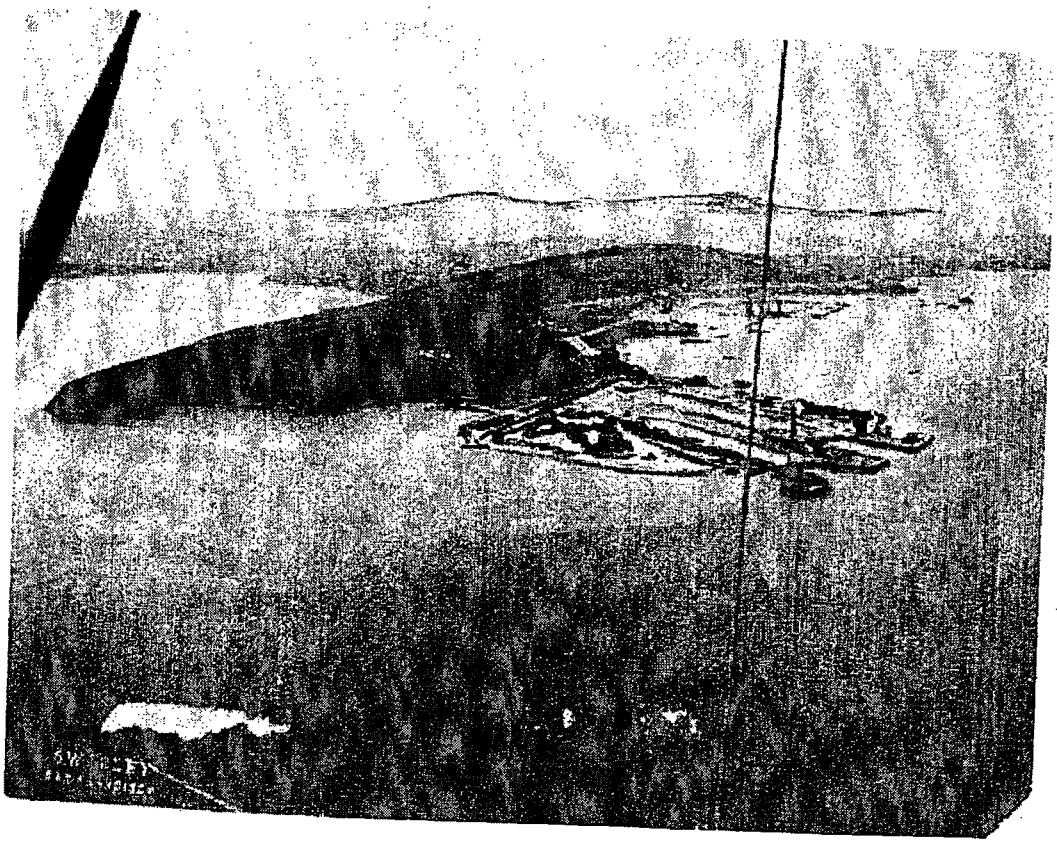

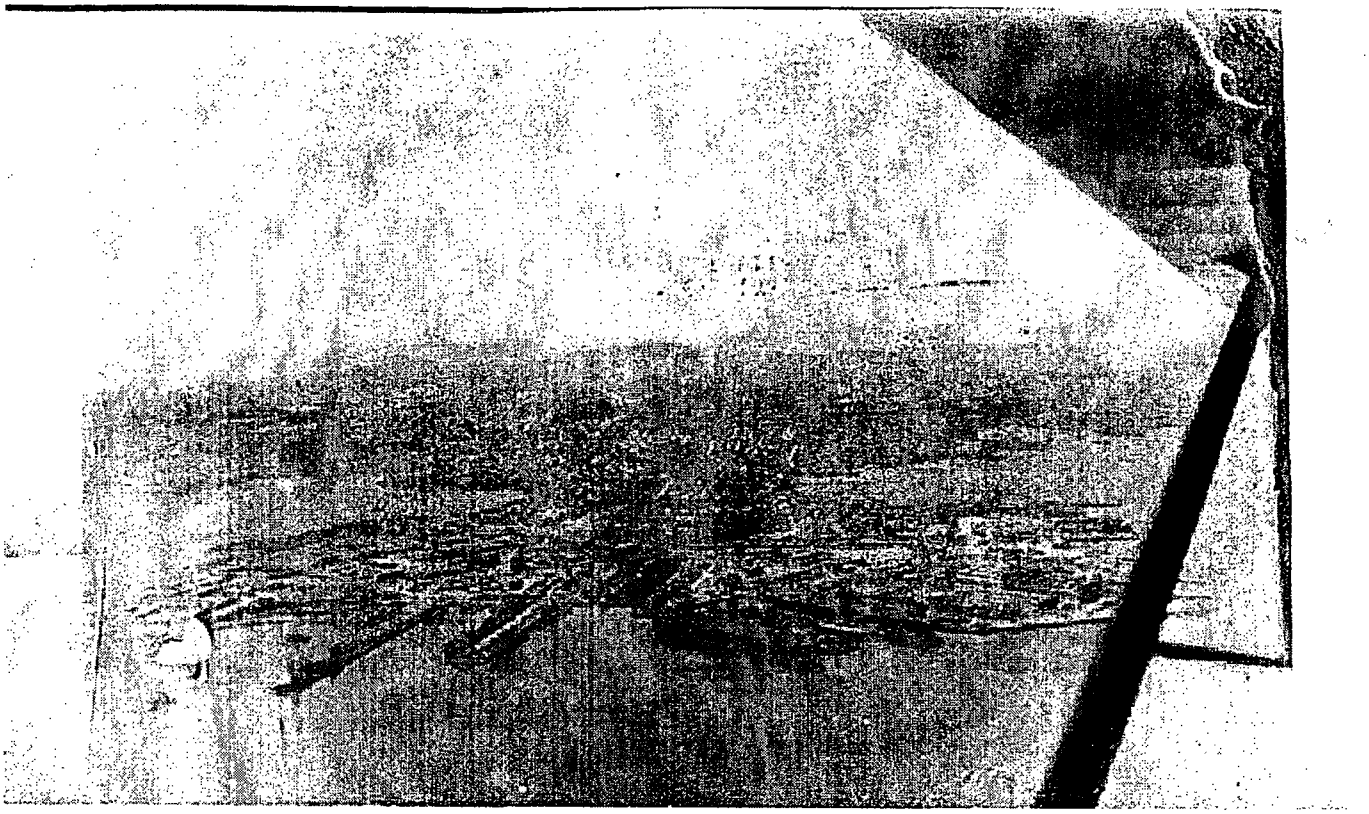

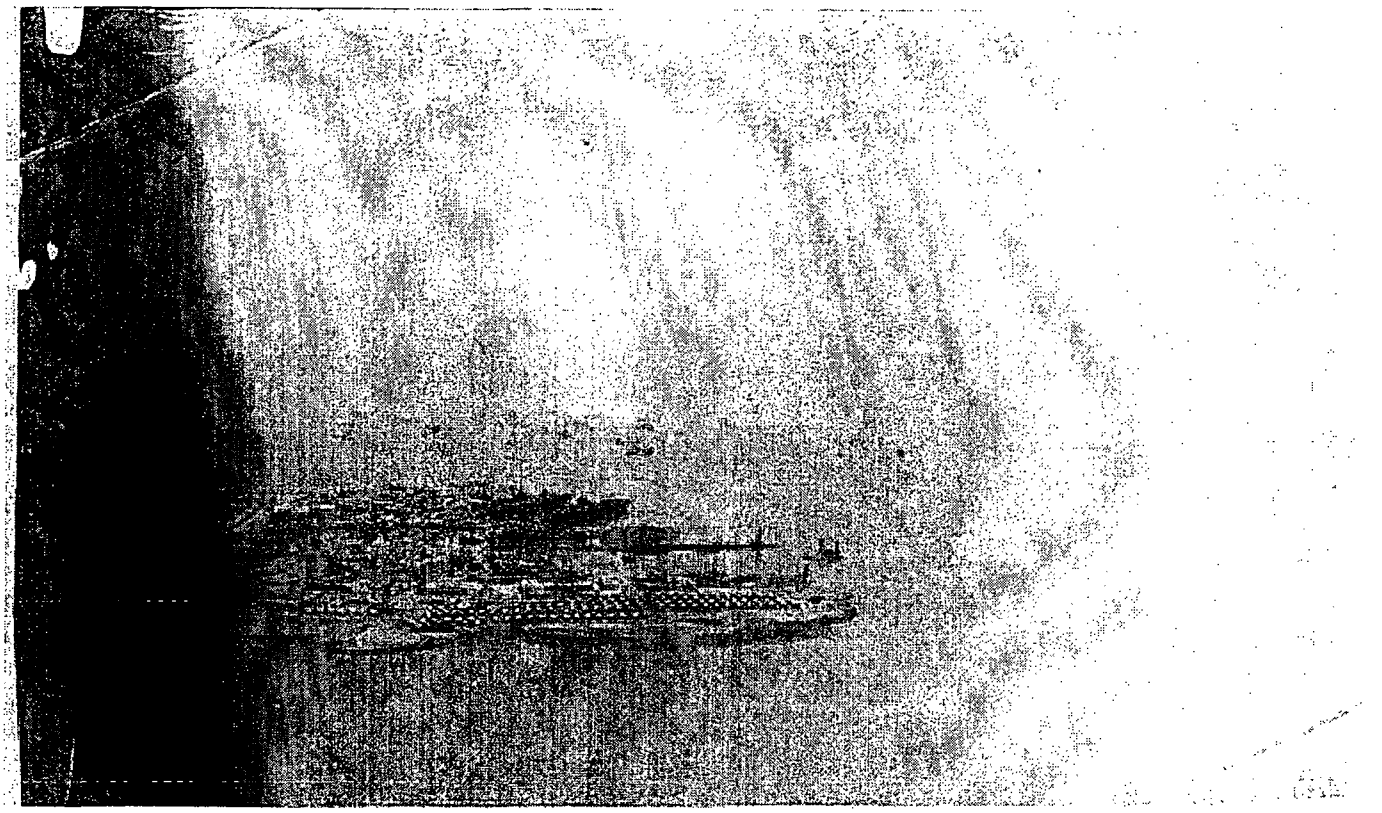

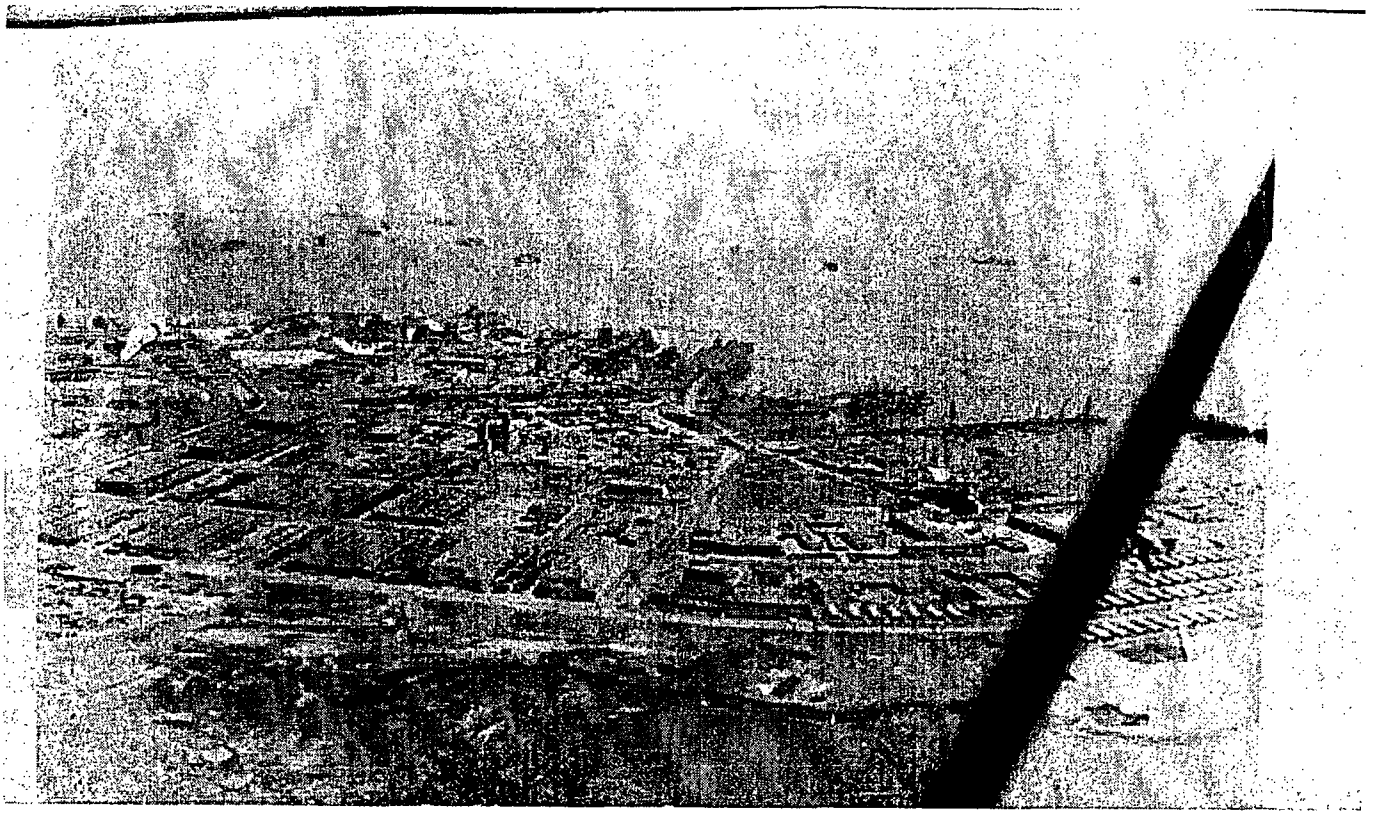

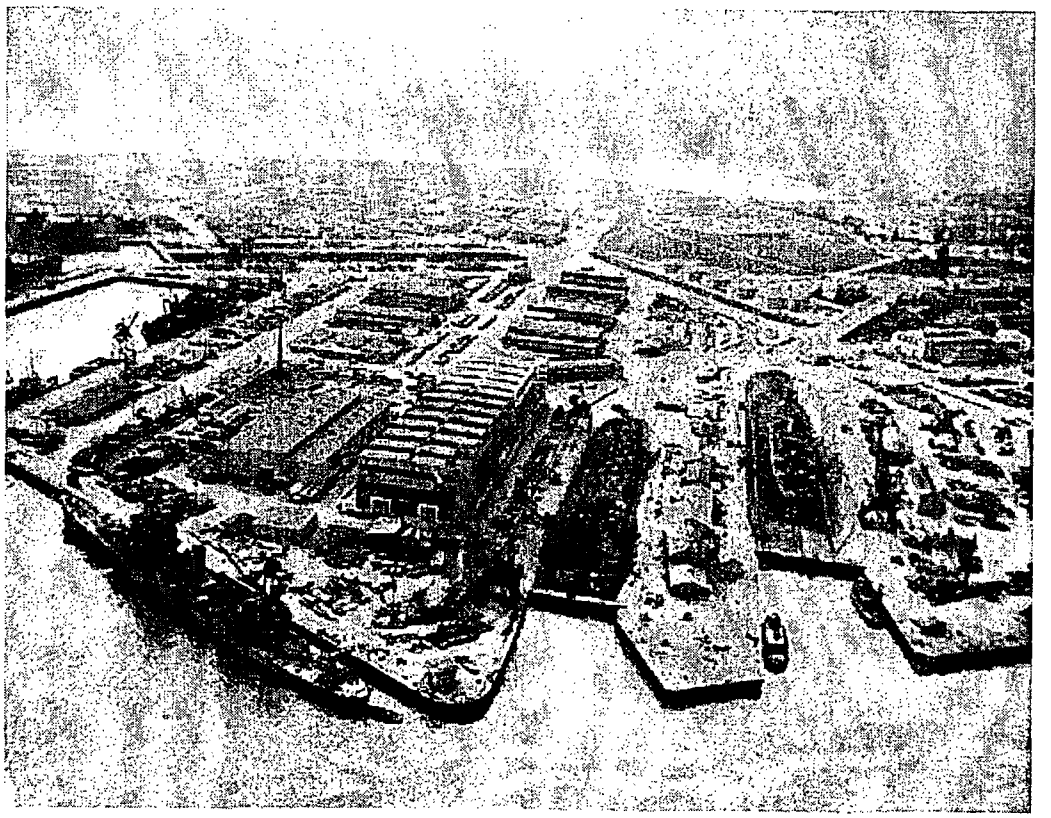

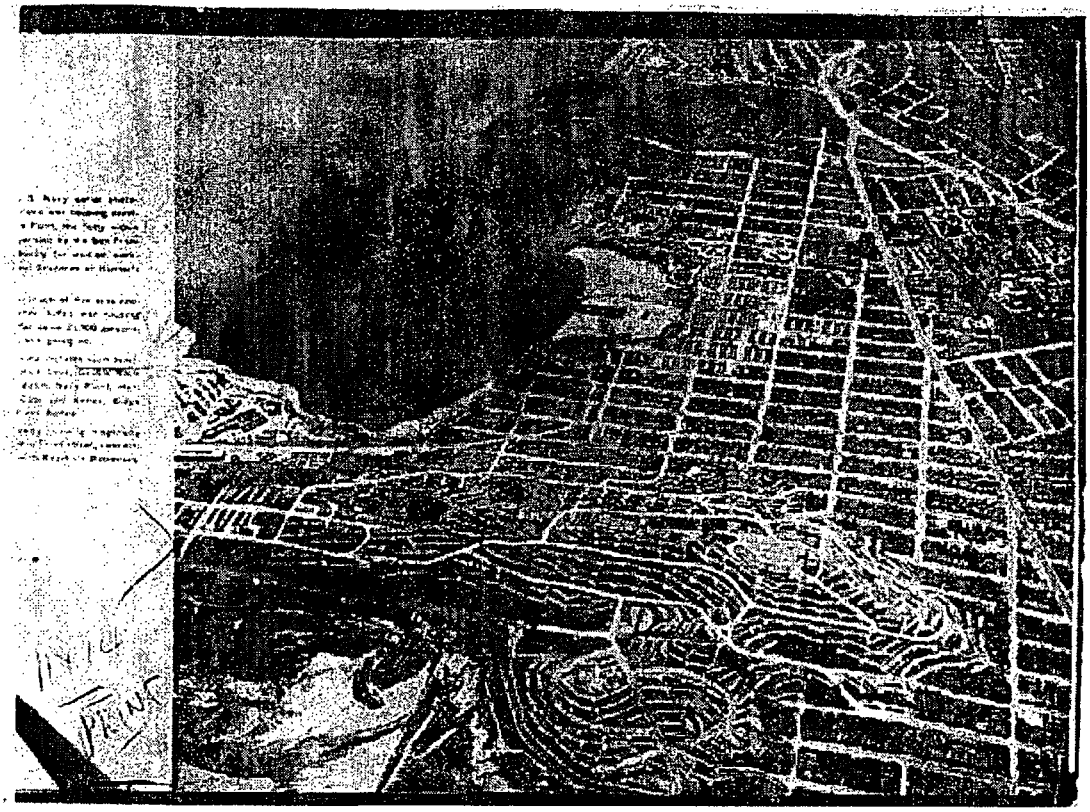

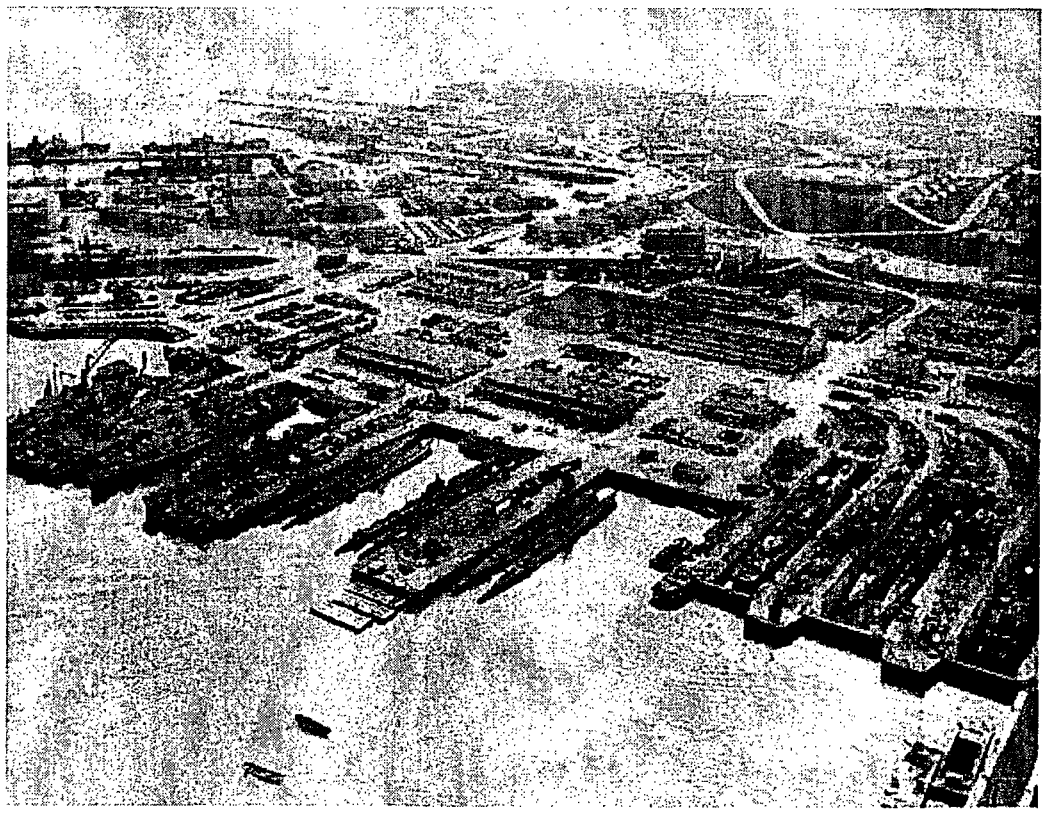

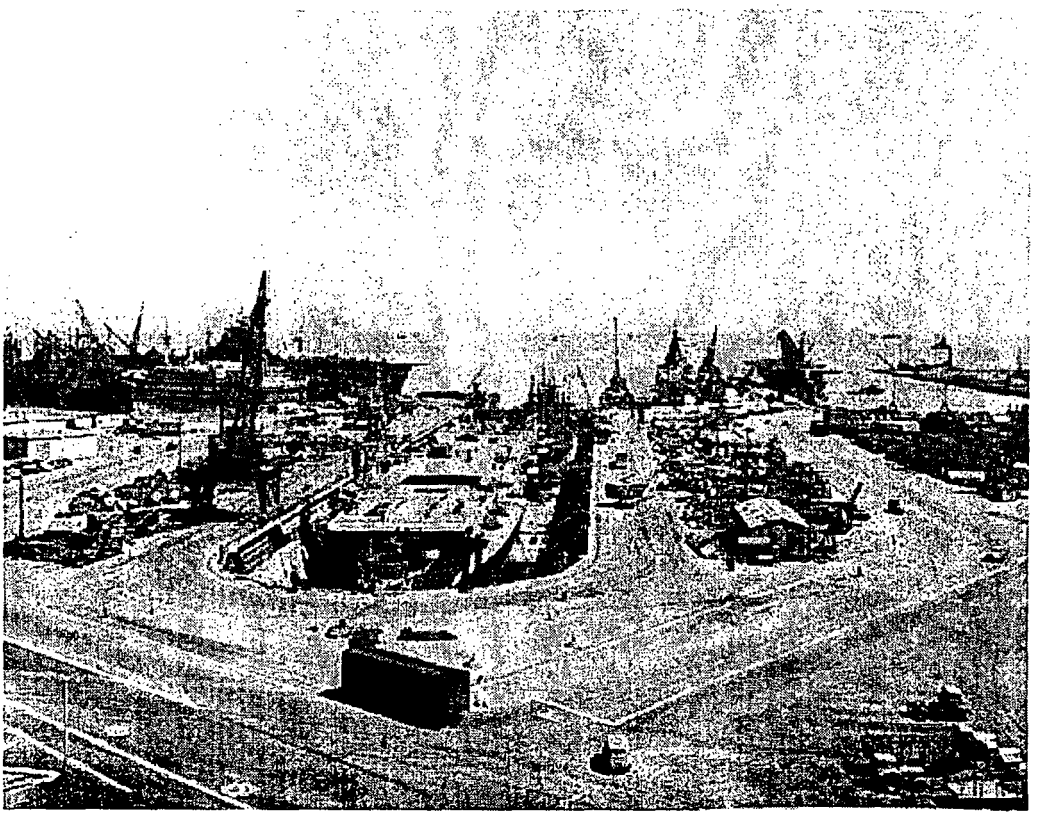

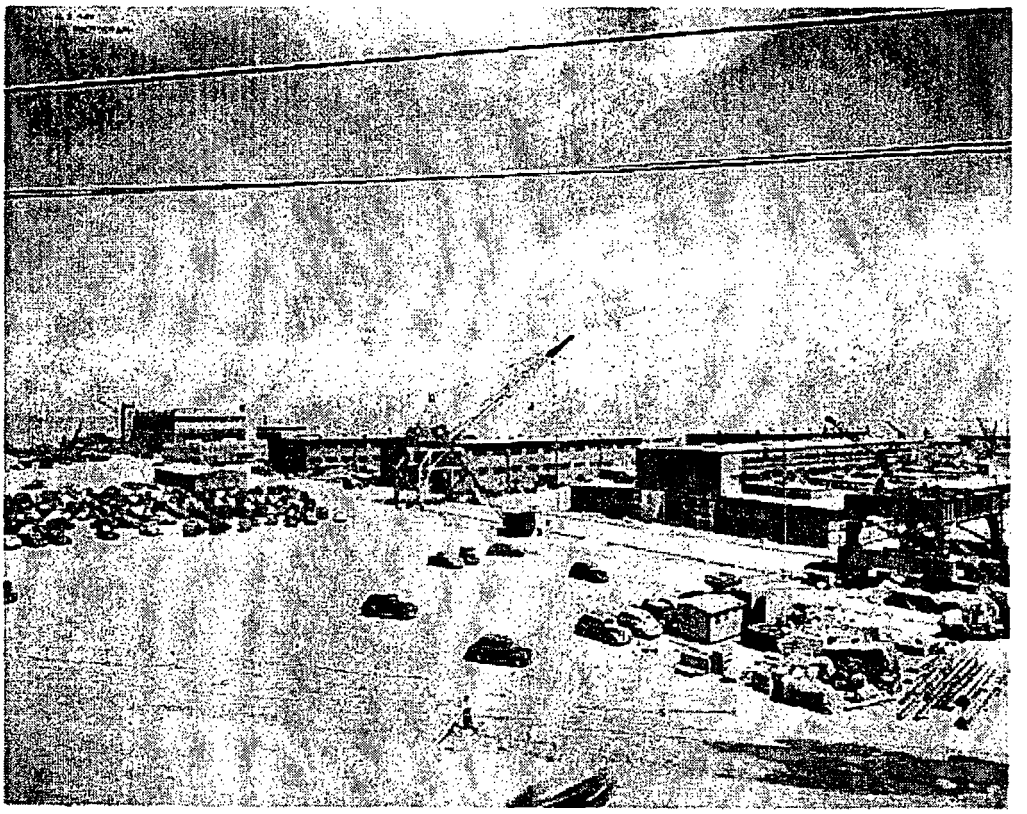

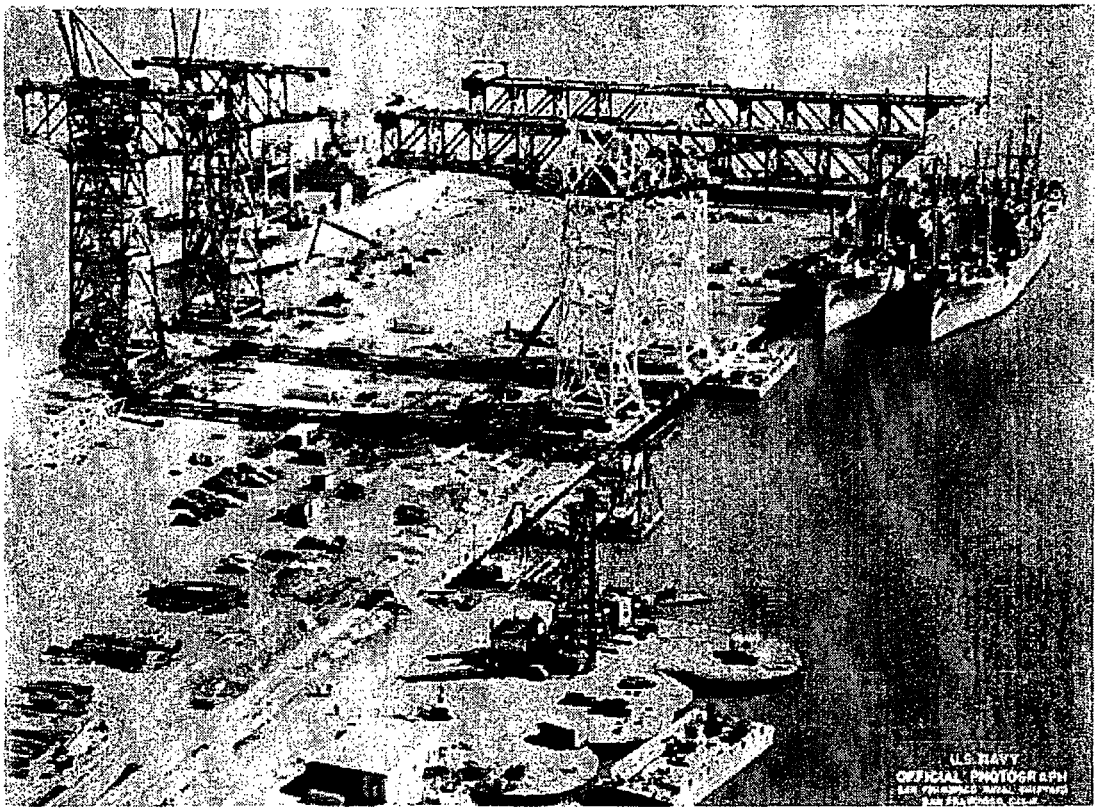
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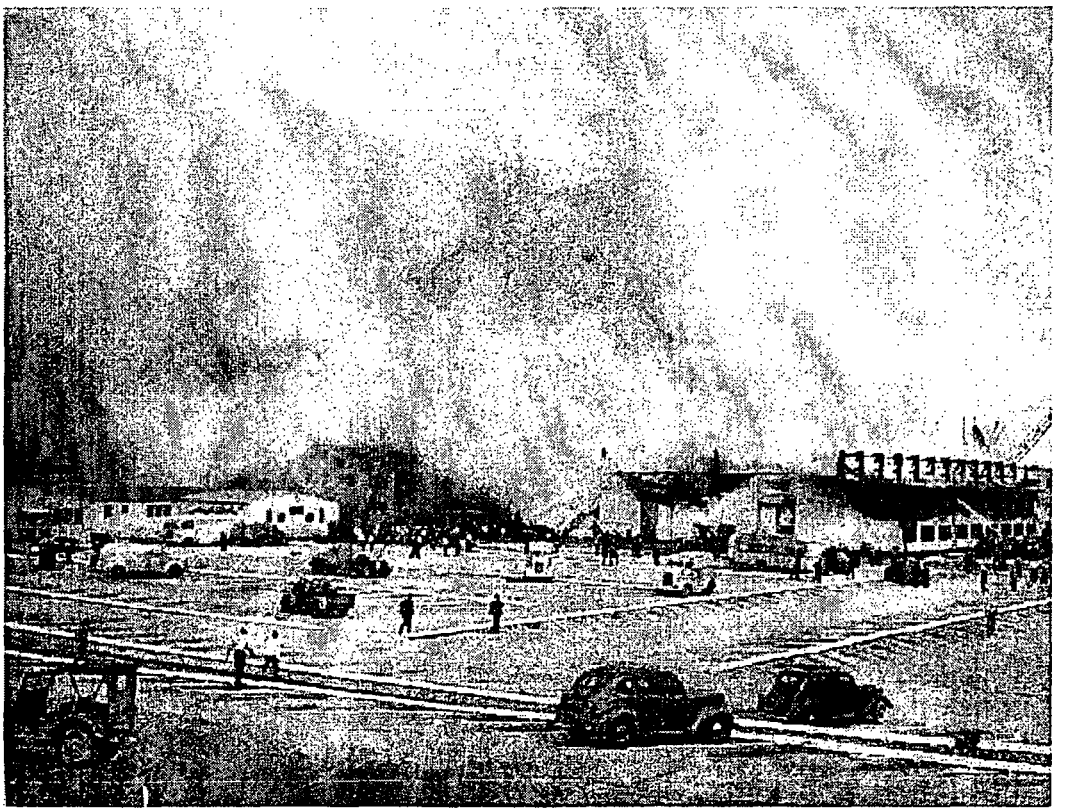


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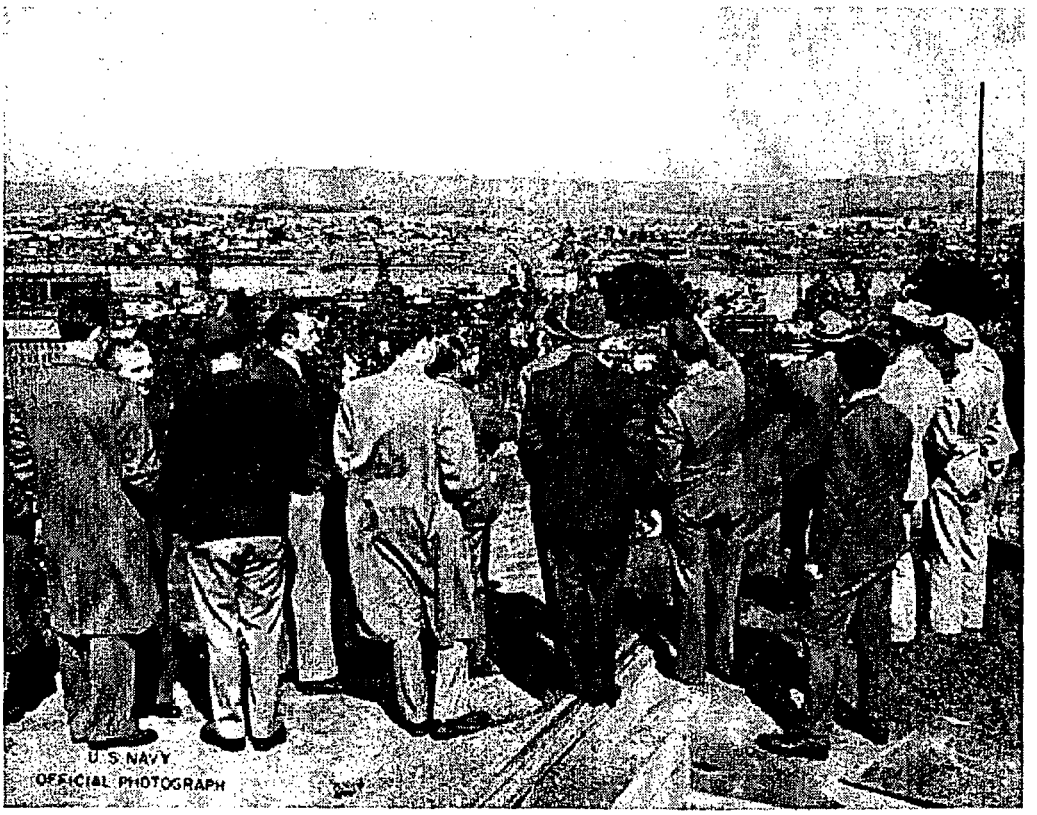
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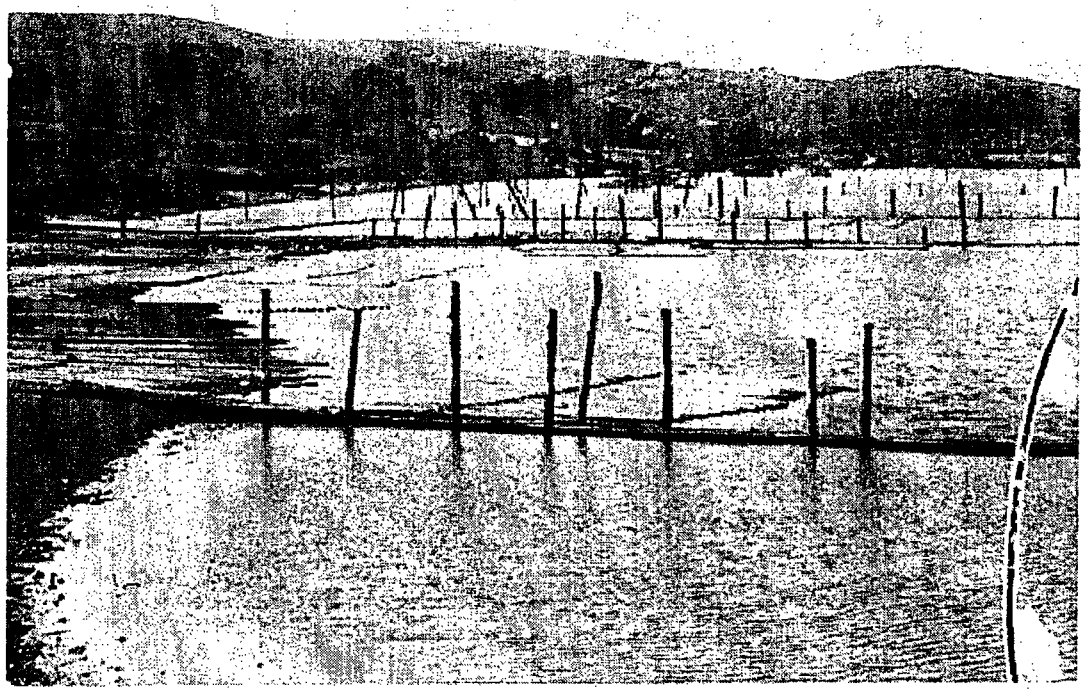

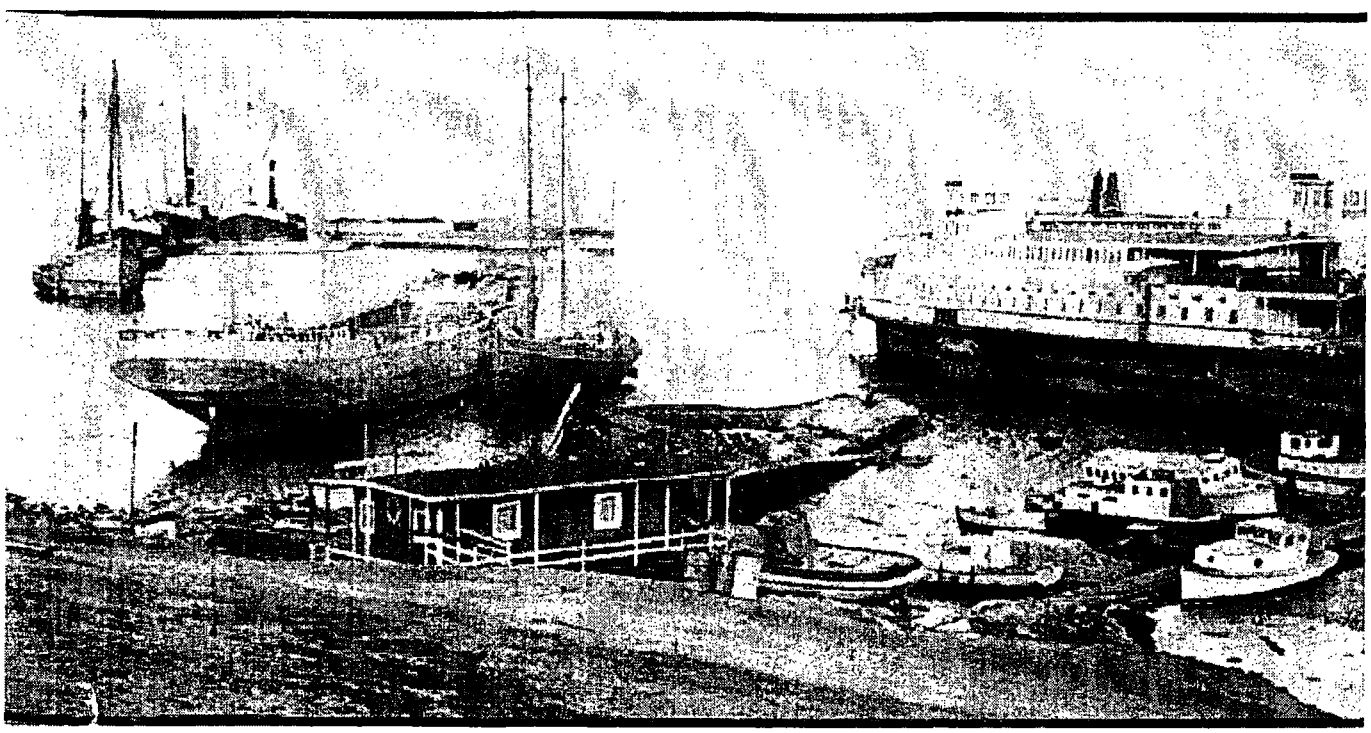

Old Photos of Hunter's Point Naval Shipyard